

**Site Characterization  
Report for the  
H. Kramer & Company  
Facility,  
El Segundo, California**

**ENSR**

Reference #: 3

Site Name: H. KRAMER

EPA ID#: CAD008260267

**Submitted to: EPA Region IX**

**Prepared for: Alschuler, Grossman & Pines,  
Counsel for H. Kramer & Company**

**Prepared by: ENSR Consulting and Engineering**

**February, 1990**

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RE: Report on Site Characterization for H. Kramer & Company  
Facility, El Segundo, California

Dear Mr. Klien;

In accordance with a request from Ms. Linda Sutton, Counsel for H. Kramer & Company, ENSR has completed the site characterization for the H. Kramer & Company Facility, El Segundo California. Please find enclosed the report on this investigation.

Sincerely,  
ENSR Corporation

Charles Keller  
Senior Project Manager

Richard O. Richter, Ph.D., P.E.  
Manager, Engineering and Geology

cc: Linda Sutton, Esq., Alschuler, Grossman, & Pines  
Jeff Zelikson, EPA Toxics & Waste Management Division  
Daniel Shane, EPA Emergency Response  
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William Jones, LA County DHS  
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Courtney Price, Esq., Anderson, Baker, Kill, & Olick  
Christopher H. Dieterich, Esq.



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## **1.0 INTRODUCTION**

ENSR Corporation has been retained by H. Kramer & Company and California Reality Holdings, Inc. to conduct an environmental site characterization for the H. Kramer & Company facility located in the city of El Segundo, California. The site characterization work was intended to continue compliance with the requirements contained in Section V.D of the EPA's Order No.88-19, dated June 7, 1988 (the "Order") (Appendix A) pertaining to the assessment of the Kramer site. A Second Revised Site Characterization Work Plan was submitted to Region IX EPA in September, 1989, and subsequently approved.

## **2.0 OBJECTIVES & APPROACH**

### **2.1 OBJECTIVES**

The site characterization work is intended to accomplish the following objectives:

- o Assess metals composition within the subsurface soils.
- o Assess metals composition within the uppermost groundwater.
- o Characterize the metals composition of the slag pile.
- o Establish groundwater flow direction and hydraulic gradient.

## 2.2 APPROACH

The field investigation included excavation of subsurface borings, using a continuous flight hollow-stem auger drill and soil sample collection utilizing a California modified eighteen (18) inch three-ringed (sleeved) split-spoon drive sampler. Borings were placed at strategic locations to aid in estimating the extent of potential constituents of concern. Monitoring wells were placed in locations where possible groundwater contamination can be evaluated within the limitations of surface obstructions (i.e., building structures).

Soil samples were collected from each of the soil borings, including those converted into monitoring wells, at prescribed intervals using protocols described in the August, 1989 Work Plan, and accepted by EPA. The samples were logged by the field geologist, stored and transported under chain-of-custody procedures, and analyzed by a California-certified hazardous waste laboratory using acceptable protocol.

Groundwater depth, pH, conductivity, and temperature data were collected from developed monitoring wells. The hydraulic gradient was estimated from groundwater and surface elevation measurements. Groundwater samples were collected from the monitoring wells and submitted for analysis.

All work was performed in accordance with applicable Federal, State, and local laws, ordinances and statutes, and generally accepted sampling protocols and procedures.

### 3.0 SITE BACKGROUND

The site is bounded between the Southern Pacific Railroad line to the north, the Atchison, Topeka and Santa Fe Railroad line to the south and Douglas Street to the east. A site location map illustrating boundaries and features is presented in Figure 3-1.

H. Kramer & Company purchased the site in 1951 from Harshaw Chemical Company, and began to operate a brass foundry at the site shortly thereafter. Foundry operations ceased in approximately April 1985, and the facility has been dormant since that date. Review of historical aerial photography suggests that development of the site began as early as 1941.

#### 3.1 OPERATING ASSUMPTIONS

Prior to the site characterization work, the surficial work specified in Kramer's Second Revised Work Plan for the Razing, Demolition and Salvaging of Buildings, Equipment and Materials (hereafter, the "Surface Plan") was completed<sup>1</sup>. It was anticipated that the EPA would then permit personnel involved in the site characterization to work using Level D personal protective equipment. The site safety officer, in consultation with the EPA On-Site Coordinator, had the discretion to require upgrade of health and safety procedures as described in the Work Plan. Following completion of personal monitoring during the initial days of field work under Level B and C protection, it was determined that a downgrading of protection was warranted. The remaining field work was conducted under Level D protection.

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<sup>1</sup>H.Kramer elected not to complete the actual razing, demolition, and salvaging of the buildings, furnaces, and bag house, because it was not required by EPA.

#### 4.0 SITE INVESTIGATION

The following sections describe the site investigation that was used to characterize this site.

##### 4.1 BACKGROUND REVIEW

In preparation of the revised work plan, a review of geologic and hydrogeologic data and of historic aerial photographs had been conducted. A discussion of information gained from this review is presented below.

Review of aerial photographs suggests that a pond may have once existed in the same area as the existing slag pile. No other areas were observed where onsite disposal is thought to have occurred. However, EPA indicated concern that disposal of dust may have occurred at some point in time in the area near the storage silos on the western corner of the site. Therefore, additional shallow hand borings in this area were included in the investigation.

##### 4.1.1 Local/Regional Geology/Hydrogeology

This discussion of the geologic/hydrogeologic conditions is taken in part from review of recent investigations on surrounding sites and in part from the following references:

- o Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County, Bulletin No. 104, Appendix A, Ground Water Geology, California Department of Water Resources, 1961.
- o Geology, Hydrology, and Chemical Character of the Ground Waters in the Torrance-Santa Monica Area, California, U.S.G.S. Water-Supply Paper 1461, 1959.

The site is thought to be underlain by dune deposits to a depth of approximately 80 to 100 feet below surface. Below this eolian deposited material, a transition zone of finer sediments (Bellflower Aquiclude), and thus lower permeability, is thought to exist with a thickness of between 20 to 50 feet. Below this "confining" layer, the Gage Aquifer exists at a depth of approximately 120 feet. The uppermost free groundwater exists at a depth of approximately 75 to 80 feet below surface.

Review of aerial photography and topographic maps suggests that the site is situated in an area of relatively lower elevation than the surrounding land. In general, the area exhibits the rolling topography typical of wind deposited sand dunes. The site surface elevation is approximately 100 feet above mean sea level (MSL). The general topographic slope of the area is to the east. Elevated areas have existed in the past; approximately 200 feet directly south of the site (elevation approximately 110 feet MSL), approximately 300 feet southwest (elevation approximately 120 feet MSL), and approximately 500 feet west (elevation approximately 140 feet MSL). The surface elevation slopes to an elevation of approximately 80 feet MSL, approximately 400 feet east of the site.

#### **4.2 SUBSURFACE INVESTIGATION: DRILLING AND SAMPLING PROCEDURES**

Drilling, soil sampling, well installation, and groundwater sampling were conducted under the technical supervision of ENSR Consulting and Engineering personnel, including a California Registered Geologist. The locations of the subsurface borings and monitoring wells are indicated on the Site Plan, Figure 4-1.

#### 4.2.1 Soil Borings

A total of nineteen (19) subsurface borings were drilled using truck mounted hollow-stem auger drills. Four (4) of the borings were drilled on a slant; two (2) of which were located on the south side of the cooling ponds, one (1) on the north side of the ponds and one (1) on the north side of the sump in the furnace building. Ten (10) vertical borings were drilled in the slag pile area and five (5) additional vertical borings were drilled and converted to groundwater monitoring wells. In addition to these, three (3) shallow hand borings were drilled in the area of the blast furnace, baghouse, and silos; and two (2) shallow hand borings were drilled in the drainage area east of the slag pile.

The shallow hand borings were placed along the north side of the blast furnace, baghouse, and storage silos, and near a drainage area northeast of the slag pile. Placement of the borings in the slag pile was to evaluate: the volume of the slag and the metals composition of underlying soils. Slant borings were placed in the areas where liquids may have leaked from their respective storage areas. Borings for most of the monitoring wells were placed along the southeast border of the site as this is the presumed downgradient position based upon previous water level measurements from the existing wells. One monitoring well was constructed in the presumed upgradient position northwest of the blast furnace and one was constructed directly southeast of the slag pile. Five (5) borings (SB1B, SB3, SB4, SB6, and SB10) in the slag pile area were drilled to depths of approximately 30 feet below the interface with native soils. Five (5) other borings (SB1A, SB2, SB5, SB8, and SB9) in the slag pile were terminated either when they encountered saturated conditions or subsurface slag materials which prevented further drilling advance.

The four (4) slant borings (B3, B4, B5, and B6) were drilled at an angle of approximately 15° to drilling depths of 50 feet (vertical depths of approximately 48 feet). The five (5) borings for monitoring well construction (MW4, MW5, MW6, MW7, MW8) were drilled to depths of approximately 30 feet below the first encounter of saturated conditions or until a competent confining layer was encountered, whichever was shallower.

For the deeper borings, soil samples were collected at 5-foot depth intervals to 30 feet, and then at 10-foot intervals until the bottom of the boring or groundwater. For the borings in the slag pile, slag samples were collected at 5-foot intervals, and soil samples were collected at 5-foot intervals starting at the slag/soil interface.

A standard penetration sampler was driven 18 inches into undisturbed soils and withdrawn to the surface and dismantled directly afterwards. The center sleeve (ring) was capped, sealed, labeled, put into cold storage (approximately 4°C) and delivered to a State certified hazardous materials/waste laboratory. Soil retained in the lower sleeve was observed for logging purposes as well as for screening in the field for volatile organics. An organic vapor analyzer with a photoionization detector (PID) was used to screen the samples for volatile hydrocarbons.

For the hand borings, penetration samples were collected at depths of 1 and 5 feet using a hand-driven sampler fitted with clean liners. No observable lead dust was encountered during drilling of the hand borings, therefore, no other samples were collected. These hand boring samples were packaged and transported to the laboratory as described above.



Drill cuttings were stored on site in approved Department of Transportation (DOT) 17H containers, appropriately labelled with a description of materials, its origin, and date of collection. The containers will remain on site until an evaluation of potential hazardous materials levels can be made at which time the soils may be removed for appropriate disposal. All sampling equipment was washed in a tap water and Alconox solution and double rinsed in distilled water prior to use.

#### 4.2.2 Groundwater Monitoring Wells

3 wells (W1, W2 + W3)  
were already in place.  
total = 8

The five (5) groundwater monitoring wells were constructed into water bearing zones determined by the managing hydrogeologist. Well materials were installed prior to withdrawal of the hollow stem auger. The wells consist of four-inch nominal diameter Schedule-40 PVC casing and screen (0.02-inch slots). The annulus surrounding the well screen and the first two (2) feet of blank pipe above the screened pipe was packed with No.3 Monterey sand. A three (3) foot bentonite sanitary seal was placed above the sand pack. The remaining annulus was filled with a cement/bentonite grout to the surface. A well head was constructed with a water-tight locking steel fill-ring set in concrete 1 inch above ground surface. No solvents or glues were utilized during well construction and all casings were be steam cleaned prior to installation. Threaded bottom caps were placed on the well casings. Illustrations of monitoring well construction features are presented on the respective boring logs (Appendix A).

Following soil sampling in Boring MW4, the borehole was backfilled to a depth of approximately 75 feet with grout and the well was constructed from this depth to the surface. During the

construction of Monitoring Well MW5, 30 feet of auger was lost down hole, during retrieval of the drill string. Because of the fear that the borehole would cave before the auger could be retrieved, the well was grouted with the augers in place.

#### **4.2.3 Monitoring Wells Development and Sampling**

All monitoring wells installed for this investigation and three (3) existing monitoring wells previously installed were developed by surge block to improve the hydraulic conductivity of the filter pack. The well bores were bailed to remove sediment which entered the wells from developing operations. Following development, the wells were purged and sampled. Purging and sampling equipment were steam cleaned prior to use. At least three (3) well volumes of water were purged prior to sampling and stored on site. Groundwater pH, electrical conductivity, and temperature, were measured during purging. Water samples were collected with a Teflon Bailer. Samples for metals analyses were filtered through a 0.45 micron filter and acidified to a pH less than 2. Samples for VOC analysis were transferred directly into 40-ml VOA vials, which were checked to insure no headspace existed before being stored for shipment. Collected water samples were stored in a cooler on blue ice at approximately 4°C and transported to the laboratory for analysis under chain-of-custody protocol. Quality Assurance/Quality Control (QA/QC) samples were collected and preserved in a similar fashion and delivered to the laboratory for analysis.

Following well development, monitoring well reference points were surveyed for elevation relative to a standard datum (MSL). Water level depths were measured from the well reference points using an electric tape. Groundwater elevations were calculated by

subtracting water depths from reference elevations and groundwater contours were calculated by comparing groundwater elevations from the wells. Groundwater elevation data from Monitoring Well MW5 was not used in the calculation of the groundwater contours, because it is believed that the groundwater elevations measured in Monitoring Well MW5 are anomalous.

#### **4.2.4 Groundwater Monitoring Plan**

Subsequent to the initial water level measurements made following well development, an additional set of measurements was collected. No significant variations from the initial measurements were observed.

## **5.0 LABORATORY ANALYSIS**

Slag, soil, and groundwater samples collected during the field operations were submitted to CRL Laboratories. All samples were accompanied by a written chain-of-custody documentation.

### **5.1 Soils**

One (1) representative slag sample from each of the slag borings (Borings SB1A, SB2, SB3, SB4, SB5, SB6, SB8, SB9, and SB10) was analyzed for Total metals (17 CAM metals, plus aluminum, iron, and manganese) and "soluble" (WET) metals (17 CAM metals, plus aluminum, iron, and manganese). An acid extraction (Method 3050) was used to determine the total metal concentrations in the slag. The California Waste Extraction Test (WET) was used to determine the soluble concentrations when in the presence of a complexing agent, citrate, which is presumed by the DHS to approximate landfill conditions. The remaining slag samples were archived.

To minimize the number of samples analyzed, the decision tree presented in Figure 5-1 was used in the selection of soil samples for analysis. Decision Levels for the process were the Total Threshold Limits Concentration (TTLC) and the Soluble Threshold Limits Concentration (STLC), as defined in the California Code of Regulations (CCR) Title 22, Division 4, Section 66699. The soil samples were analyzed for total concentrations of the 17 CAM metals in accordance with California guidelines for comparison with the TTLC's. In addition to the 17 CAM metals, total concentrations for aluminum, iron, and manganese were also determined. Soil samples with total metal concentrations that exceeded ten times the STLC, were submitted for analysis by California Waste Extraction Test (WET).

Initially, in the slag borings, the soil sample from the slag/soil interface and the soil sample from 15 feet below the interface were the first two soil samples analyzed from the boring. In the other borings the first two samples analyzed were the samples from depths of 5 and 20 feet. In each boring, if any of the Decision Levels were exceeded in the deeper of the original two samples analyzed, the next round of analyses tested for those parameters exceeding their Decision Levels in deeper samples. If, in the deeper sample, Decision Levels were not exceeded, but were in the shallower sample, samples from between these two were analyzed. If Decision Levels were not exceeded in either of the initial two samples analyzed, no additional samples from that boring were analyzed.

Select soil samples were analyzed for volatile organic compounds (VOC) by EPA Method 8240. Samples were screened in the field with a Photo-ionization Detector (PID) organic vapor meter. If soil samples exceeded 50 ppm on the PID, the sample from the boring with the highest reading was selected for the VOC analysis.

## 5.2 Groundwater

The filtered groundwater samples were analyzed for total concentrations of 17 CAM metals (CCR Title 22), plus aluminum, iron, and manganese, using EPA Methods 3005/6010. Unfiltered samples were analyzed for volatile organic compounds, using EPA Method 8240.

## 6.0 RESULTS

### 6.1 Slag Borings Sample Analyses

Results of the metals analyses of the samples collected from the ten borings completed in the slag pile are presented in Table 6.1. In summary, five (5) samples collected of the slag material (SB1A-5, SB3-5, SB4-10, SB5-5, and SB9-3), were found to contain total lead (Pb) levels above the TTLC. All nine (9) slag samples collected from the slag pile (these five samples and SB2-5, SB6-5, SB8-10, and SB10-10) were found to contain levels of "soluble" lead by WET extraction above the STLC. Similarly, levels of copper (Cu) and zinc (Zn) were detected as both total and "soluble" in excess of the respective TTLC's and STLC's. It should be noted that the use of the WET extraction does not represent the actual solubility of the metals in question, under natural conditions, if the material were left in-place.

Some of the samples collected from the interface between the slag and the underlying materials (SB1B-15, SB3-15, and SB5-18) were found to have total arsenic (As) concentrations in excess of the TTLC. However, total lead (Pb) levels were below the TTLC in these and the other interface samples.

Soil samples collected from approximately 15 feet below the interface (SB1B-30, SB3-30, SB6-30, and SB10-30) contained total lead (Pb) levels which were well below the TTLC and also well below ten times the STLC. These samples contained total arsenic (As) levels that were below the TTLC, however, SB10-30 had a total arsenic level 38 times the STLC.

Figure 6-1 presents a cross-section along the long axis of the slag pile. Total concentrations of lead and arsenic are shown on the cross-section.

Three (3) soil samples (SB3-25, SB4-60, and SB5-10) were analyzed for Purgeable Organics using EPA Method 8240. Acetone was the only compound detected (17, 15, and 21 ug/kg, respectively) in these samples. It was reported by the laboratory that these results should not be considered representative. It is believed that these levels may represent contamination in the laboratory from the use of acetone as an extraction solvent.

## **6.2 Monitoring Well Borings Sample Analyses**

Results of the metals analyses of the samples collected from the five borings completed for monitoring well installations are presented in Table 6.2. Soil samples collected from the borings for Monitoring Wells MW6, MW7, and MW8 contained total metal concentrations that were below even the STLC's for the respective 17 CAM metals. The samples collected from 5 and 20 feet depths were analyzed from these three borings. Since none of these levels exceed the decision level, no other samples were analyzed from these three borings.

However, some of the soil samples collected from borings for Monitoring Wells MW4 and MW5 contained levels of antimony (Sb), arsenic (As), and selenium (Se) in excess of the respective TTLC's. Additional analysis of samples from these borings was completed, the results of which are presented in Table 6.2.

One (1) soil sample (MW4-60) was analyzed for Purgeable Organics using EPA Method 8240. Acetone was the only compound detected (15 ug/kg) in this sample. It was reported by the laboratory that this result should not be considered representative. It is beleived that this level may represent contamination in the laboratory from the use of acetone as a cleaning substance. One (1) other soil sample from a monitoring well boring (MW8-70) was selected for organic analysis based on field observations; however, because of a mistake at the laboratory, the analysis was never completed. An additional boring will be completed next to MW8, and a sample will be collected to complete this requirement of the work plan. The results will be forwarded when completed.

### **6.3 Slant Borings Sample Analyses**

Results of the metals analyses of the samples collected from the four slant borings are presented in Table 6.3. Soil samples collected from the slant borings near the evaporation ponds (B3, B4, and B5) and the furnace building sump (B6) contained total metal concentrations that were below the TTLC's and even the STLC's (excluding B6-5) for the respective 17 CAM metals. The samples collected from 5 and 20 feet were analyzed from these four borings. Except for the arsenic level in B6-5, none of the levels exceeded the decision level and therefore no other samples were analyzed from these four borings. An analysis for "soluble" (WET) arsenic was conducted on Sample B6-5, results of which are presented on Table 6.3.

Two (2) soil samples from slant borings (B3-30 and B4-10) were selected for organic analysis based on field observations; however, because of a mistake at the laboratory, the analyses were never completed. Additional borings will be completed next to B3 and B4,



and samples will be collected to complete this requirement of the work plan. The results will be forwarded when completed.

#### **6.4 Hand Borings Sample Analyses**

Results of the metals analyses of the samples collected from the five hand borings are presented in Table 6.4. Soil samples from Hand Borings HB1, HB2, and HB3 (drilled west of the Furnace Building) contained total metal concentrations well below the TTLC's for the 17 CAM metals. However, the total arsenic (As) and lead (Pb) levels in Sample HB2-5 exceeded the respective STLC's by approximately ten times. Therefore, a "soluble" (WET) analysis for these two metals was conducted on this sample and results are pending.

Hand Borings HB4 and HB5 (drilled north of the slag pile), contained total metal concentrations below the TTLC's for the 17 CAM metals. However, the total concentrations of antimony (Sb), arsenic (As), copper (Cu), lead (Pb), and zinc (Zn) levels exceeded the respective STLC's by factors greater than ten times in some of the samples. Therefore, "soluble" (WET) analyses for these metals were conducted on some of these samples and the results are presented in Table 6.4.

#### **6.5 Groundwater Sample Analyses**

Results of the metals analyses and the volatile organic compounds of the ground water samples collected from the monitoring wells are presented in Tables 6.5.1 and 6.5.2. Monitoring Well MW7 did not produce sufficient water for sample collection. An additional attempt to collect a sample from this well will be made in the near future and the results will be forwarded when complete. Filtered

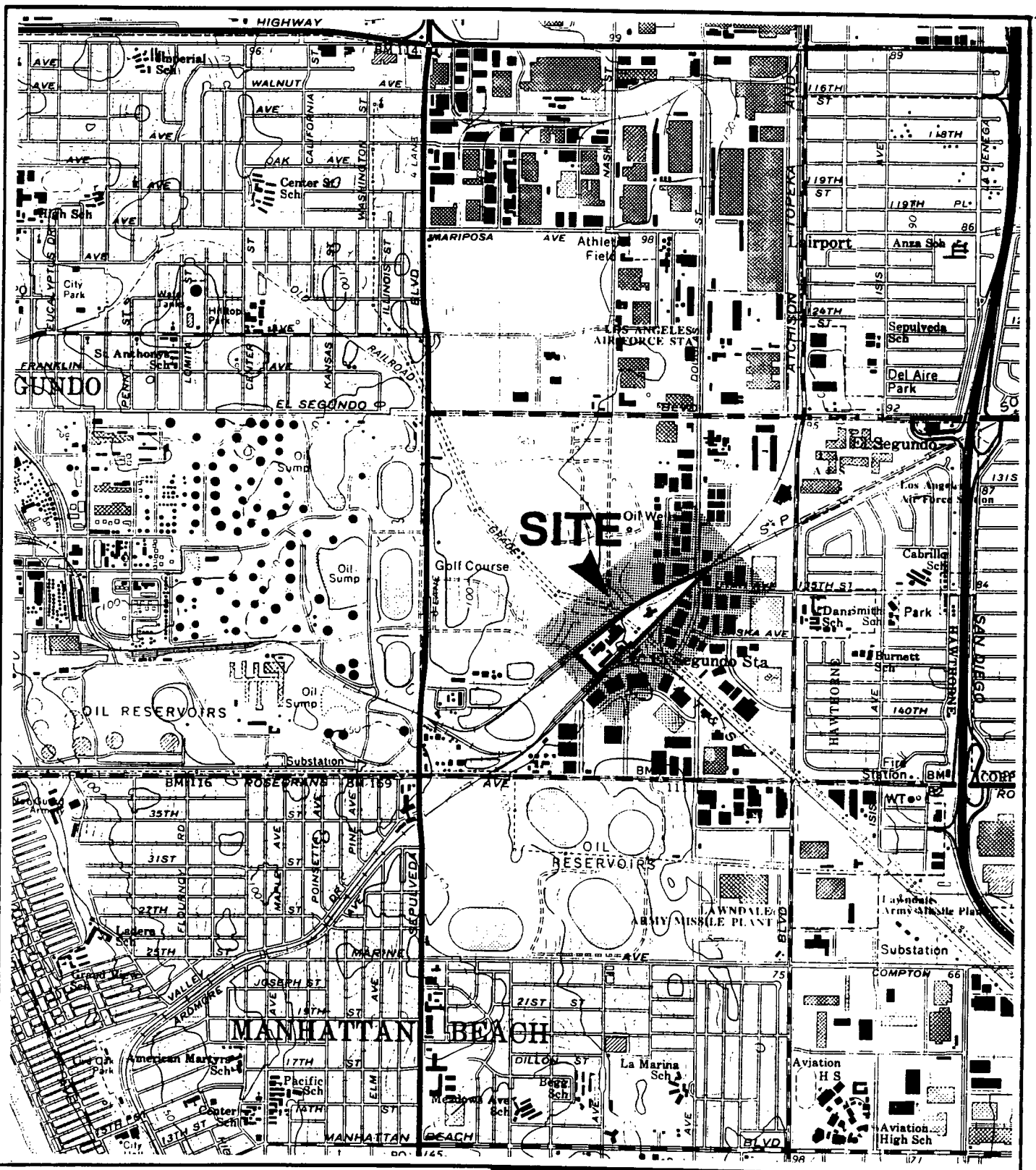
groundwater samples collected from five (5) of the eight monitoring wells (MW1, MW2, MW3, MW5, and MW6) contained various metals.

Chlorinated hydrocarbon compounds were detected in all seven of the monitoring wells for which volatile organic analyses were completed. Aromatic hydrocarbons (toluene, xylenes, and/or ethylbenzene) were also detected in groundwater samples from Monitoring Wells MW2, MW3, MW4, and MW5.

## 6.6 Groundwater Monitoring

Table 6.6 presents the well head reference point elevations, depth to water measurements, and calculated groundwater elevations. Based on an interpretation of the groundwater elevations measured in Monitoring Wells MW1, MW2, MW3, MW4, MW6, MW7, and MW8, groundwater appears to be flowing beneath the site in an easterly direction at the southwestern corner of the property and in a southerly direction at the northern end of the property. Groundwater appears to flow away from the property along the southeastern side of the property, in a southerly to southeasterly direction. A groundwater contour map is presented in Figure 6-2.

MW1 = W1  
MW2 = W2  
MW3 = W3



REFERENCE: USGS 7.5 MINUTE SERIES  
INGLEWOOD QUADRANGLE 1981  
VENICE QUADRANGLE 1981

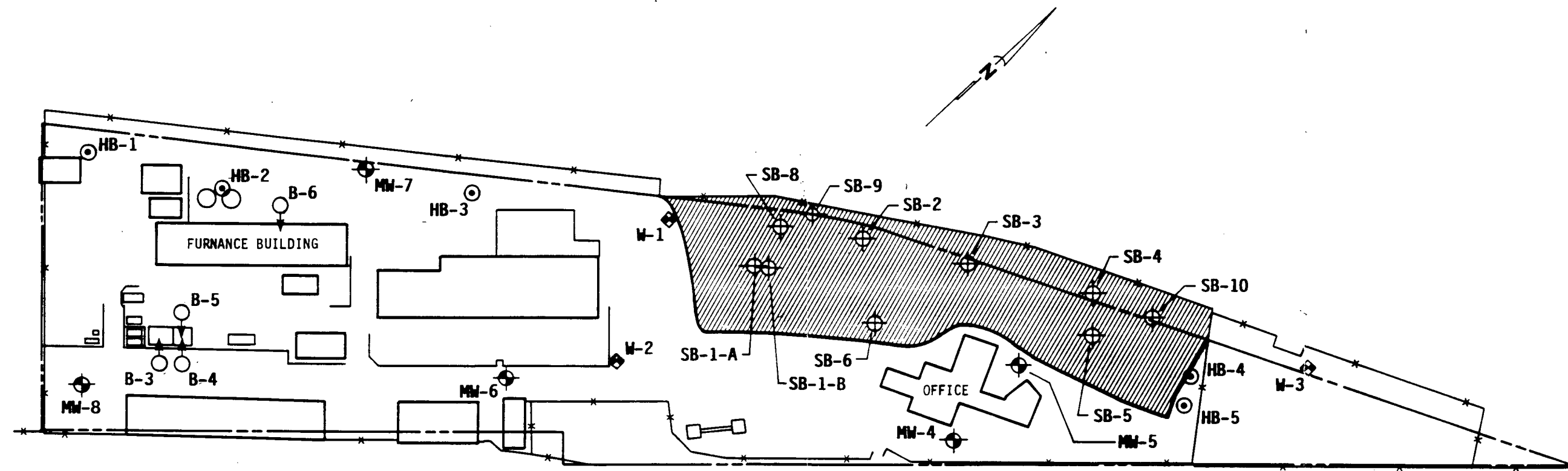


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
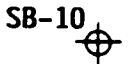
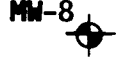


**ENSR**

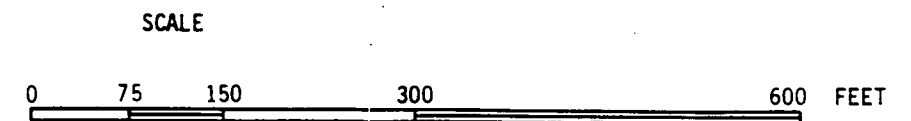
**SITE LOCATION MAP  
H. KRAMER & COMPANY FACILITY  
EL SEGUNDO, CALIFORNIA**

DRAWN BY: <i>BM</i>	DATE: <i>5/19/89</i>	PROJECT NO: 9500-077
CHK'D BY:	REVISED:	DWG.NO: FIGURE 1-1



# EXPLANATION

-  SLAG PILE
-  W-3 LOCATION OF MONITORING WELL INSTALLED DURING PREVIOUS INVESTIGATION
-  SB-10 LOCATION OF SOIL BORING
-  W-8 LOCATION OF SOIL BORING/MONITORING WELL INSTALLED DURING THIS INVESTIGATION
-  B-6 LOCATION OF SLANT BORING (SHOWING DIRECTION OF SLANT)
-  HB-5 LOCATION OF HAND BORING



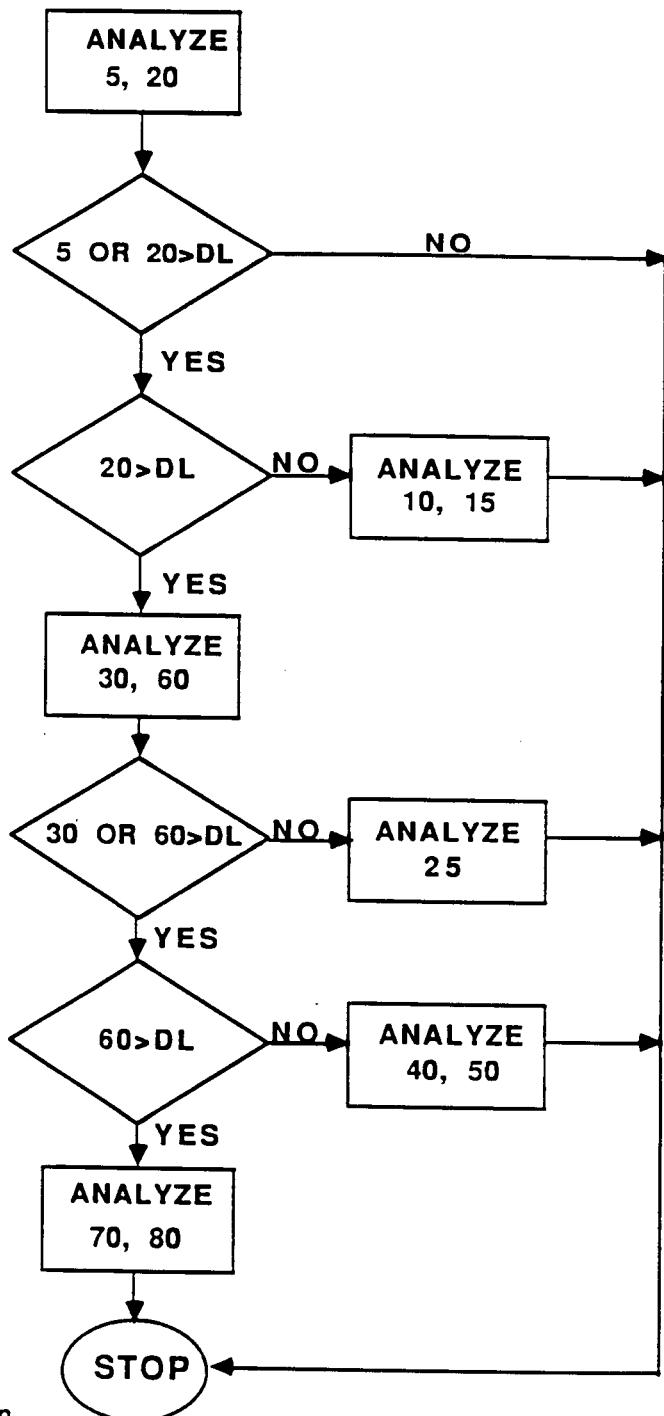
**ENSR**

SITE PLAN  
H. KRAMER & COMPANY FACILITY  
EL SEGUNDO, CALIFORNIA

REFERENCE: JENNINGS ENGINEERING COMPANY, A.L.T.A. SURVEY, SEPTEMBER 13, 1984

DRAWN BY: <i>AM</i>	DATE: <i>1/10/90</i>	PROJECT NO.: 9500-089
CHK'D BY:	REVISED:	DWG. NO.: FIGURE 4-1

Figure 5 - 1: SAMPLE ANALYSIS DECISION TREE

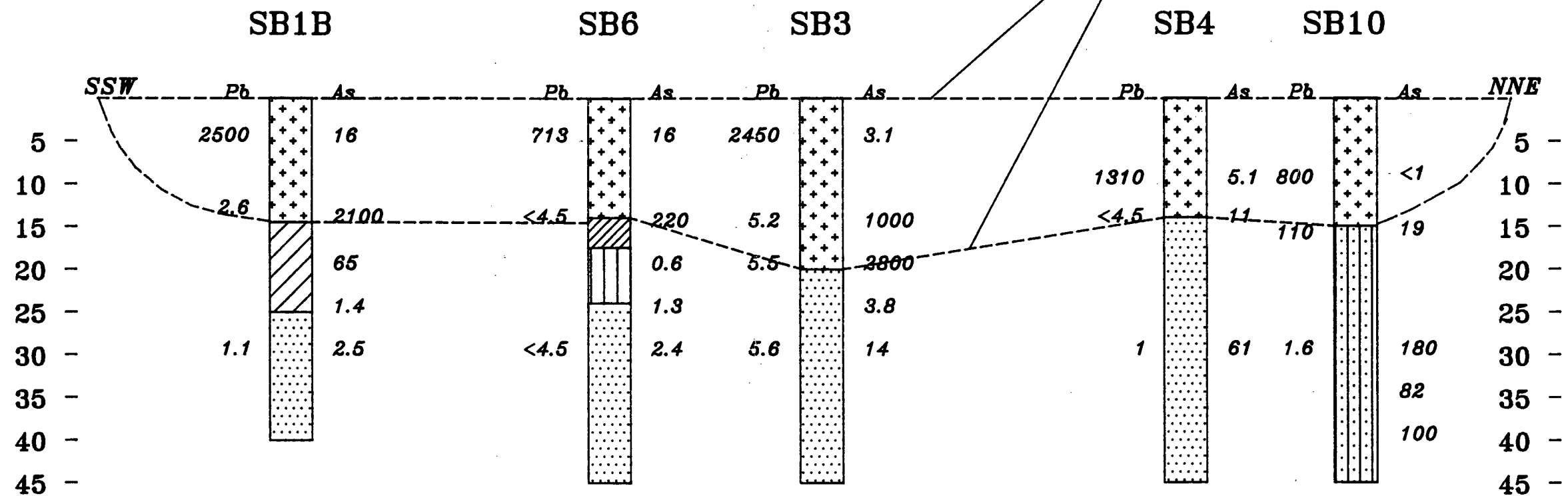


**NOTES**

- 1) DL = Decision Level Concentration
- 2) Numbers correspond to sample depth in feet.

APPROXIMATE  
DEPTH FROM TOP  
OF SLAG PILE (FEET)

ESTIMATED UPPER AND LOWER  
LIMITS OF SLAG PILE



### EXPLANATION

- FILL
- SAND
- SILTY SAND
- CLAYEY SILT
- SILTY CLAY
- CLAY

Pb TOTAL LEAD CONCENTRATIONS IN mg/kg

As TOTAL ARSENIC CONCENTRATIONS IN mg/kg

Drilled to a  
depth of 30'  
below interface  
w/ native  
soils

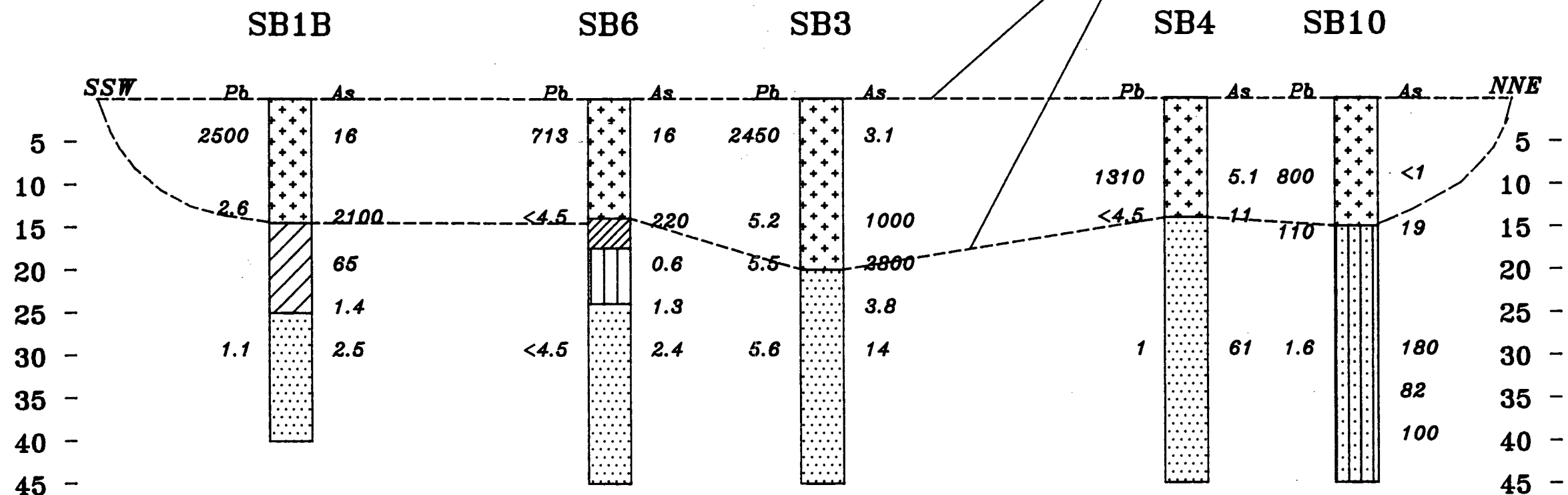
100 feet  
SCALE

**ENSR**™

GENERALIZED  
CROSS-SECTION  
SSW TO NNE  
ALONG SLAG PILE  
H.KRAMER FACILITY,  
EL SEGUNDO CALIFORNIA

APPROXIMATE  
DEPTH FROM TOP  
OF SLAG PILE (FEET)

ESTIMATED UPPER AND LOWER  
LIMITS OF SLAG PILE

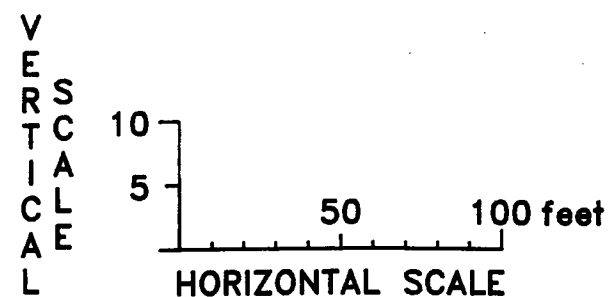


### EXPLANATION

- FILL
- SAND
- SILTY SAND
- CLAYEY SILT
- SILTY CLAY
- CLAY

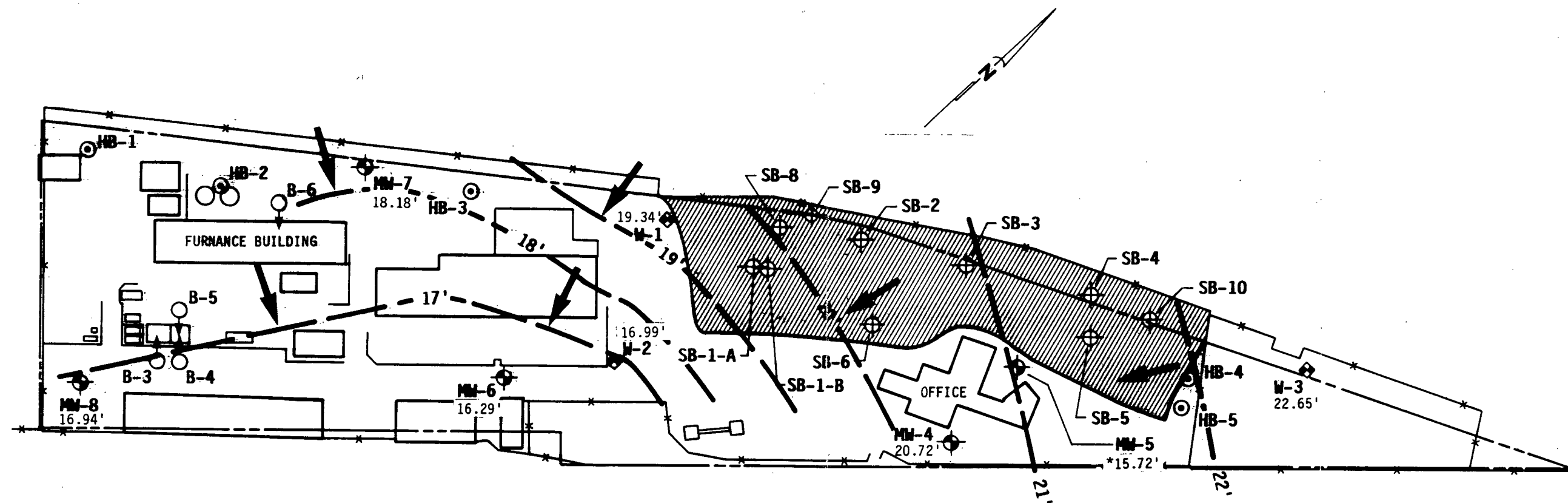
Pb TOTAL LEAD CONCENTRATIONS IN mg/kg

As TOTAL ARSENIC CONCENTRATIONS IN mg/kg



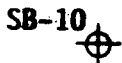
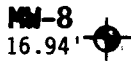


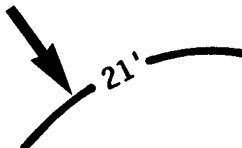


**ENSR**<sup>TM</sup>

GENERALIZED  
CROSS-SECTION  
SSW TO NNE  
ALONG SLAG PILE  
H.KRAMER FACILITY,  
EL SEGUNDO CALIFORNIA



# EXPLANATION

-  SLAG PILE
-  W-3 LOCATION OF MONITORING WELL INSTALLED DURING PREVIOUS INVESTIGATION
-  SB-10 LOCATION OF SOIL BORING
-  MW-8 16.94' LOCATION OF SOIL BORING/MONITORING WELL INSTALLED DURING THIS INVESTIGATION SHOWING GROUND-WATER ELEVATION (IN FEET ABOVE MSL) MEASURED 1/9/90
-  B-6 LOCATION OF SLANT BORING (SHOWING DIRECTION OF SLANT)
-  HB-5 LOCATION OF HAND BORING
-  APPROXIMATE GROUND-WATER CONTOUR  
CONTOUR INTERVAL 1', DATUM MSL  
ARROW SHOWING INFERRED FLOW DIRECTION  
\* GROUND-WATER ELEVATION IN MW-5 NOT USED IN CONTOUR CALCULATION

SCALE

0 75 150 300 600 FEET

**ENSR**

GROUND-WATER CONTOUR MAP  
H. KRAMER & COMPANY FACILITY  
EL SEGUNDO, CALIFORNIA

REFERENCE: JENNINGS ENGINEERING COMPANY, A.L.T.A. SURVEY, SEPTEMBER 13, 1984

DRAWN BY: <i>AE</i>	DATE: 1/10/90	PROJECT NO.: 9500-089
CHK'D BY:	REVISED:	DWG. NO.: FIGURE 6-2



TABLE 6.1  
RESULTS OF LABORATORY ANALYSES

Sample	Sb	As	Ba	Be	Cd	Cr	Cr HEX	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	V	Zn	Al	Fe	Mn
Totals	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
WET	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
TTLC <sup>5</sup> <sub>6</sub>	500	500	10000	75	100	500		8000	2500	1000	20	3500	2000	100	500	700	2400	5000			
STLC <sup>5</sup> <sub>6</sub>	15	5	100	0.75	1	5		80	25	5	0.2	350	20	1	5	7	24	250			
SB1A-5(Total)	ND<100.0	16	310	230	6	37	ND<1.0	28	12000	2500	0.18	33	310	ND<0.1	ND<5.0	ND<1.0	27	65000	18000	31000	41000
SB1A-5(WET)	4.4	0.53	8	6.1	0.4	1	ND<0.05	0.8	68	130	ND<0.005	1.1	4.3	0.03	ND<0.2	ND<0.3	0.6	3400	530	1400	140
SB1B-15(Total)	ND<1.0	2100	45	0.3	ND<0.05	5.5	ND<1.0	4.7	15	2.6	0.15	0.07	5.3	ND<0.1	ND<0.05	ND<1.0	13	24	7400	9700	380
SB1B-15(WET)		370																			
SB1B-20(Total)		65																			
SB1B-25(Total)		1.4																			
SB1B-30(Total)	ND<1.0	2.5	15	0.13	0.16	5	ND<1.0	1.5	6.1	1.1	0.08	0.18	4.9	0.5	ND<0.05	ND<1	8.8	13	2000	4900	52
SB2-5(Total)	ND<1.0	3.7	68	47	2.2	8.2	1.21	6.3	3300	700	0.16	11	280	1.1	0.72	ND<1.0	3.6	30000	9600	19000	1200
SB2-5(WET)	3.3	0.53	9	5.3	0.4	0.7	ND<0.05	0.6	16	69	ND<0.005	2.6	11	ND<0.01	ND<0.2	ND<0.3	ND<0.2	3100	810	1100	93
SB2-16(Total)	5	200	21	18	0.78	13	ND<1.0	5	1700	420	0.04	6.3	39	1.4	0.25	ND<1.0	4.1	20000	4400	19000	400
SB2-16(WET)		130							ND<0.50	5.1								2500			
SB3-5(Total)	ND<5.0	3.1	501	106	29.5	19.3	ND<1.0	17	3000	2450	0.36	24.4	116	2	1.9	ND<1.0	17.5	76000	10600	22100	1430
SB3-5(WET)	0.76	ND<0.50	14.4	3.9	4.1	0.72	ND<0.05	0.57	101	259	ND<0.005	0.84	2.4	ND<1.0	ND<0.05	ND<10.0	0.26	6830	189	623	44.8
SB3-15(Total)	102	1000	74.3	0.22	ND<0.49	7.9	ND<1	10.6	22	5.2	0.03	ND<1.9	4.6	0.9	0.97	ND<1.0	13.8	61	2910	5630	1110
SB3-15(WET)	8.9	152	4	ND<0.01	ND<0.05	0.23	ND<0.05	0.61	0.099	ND<0.25	ND<0.005	ND<0.1	ND<0.2	ND<1.0	ND<0.05	ND<10.0	0.54	4.1	32.3	160	47.1
SB3-20(Total)	ND<4.9	2800	25.6	ND<0.2	ND<0.49	6.7	ND<1.0	2.8	36.2	5.5	ND<0.02	ND<2.0	6.5	ND<0.1	ND<0.98	ND<1.0	12.9	75.6	3420	6010	104
SB3-20(WET)		12																			
SB3-25(Total)		3.8																			
SB3-30(Total)	ND<5.0	14	23.1	ND<0.2	ND<0.5	4.7	ND<1.0	1.4	13.8	5.6	0.03	ND<2.0	4.6	0.1	ND<1.0	ND<1.0	6.3	56.8	2120	3380	78.7
SB3-30(WET)	0.9	ND<0.50	2.3	ND<0.010	ND<0.025	0.1	ND<0.05	0.09	0.73	0.63	ND<0.005	ND<0.10	ND<0.20	ND<1.0	ND<0.050	ND<10.0	0.15	9.2	10.2	14	5.2

TABLE 6.1 (continued page 2)  
RESULTS OF LABORATORY ANALYSES

Sample	Sb	As	Ba	Be	Cd	Cr	Cr HEX	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	V	Zn	Al	Fe	Mn
Totals	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
WET	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
=====																					
TtLC	500	500	10000	75	100	500		8000	2500	1000	20	3500	2000	100	500	700	2400	5000			
STLC	15	5	100	0.75	1	5		80	25	5	0.2	350	20	1	5	7	24	250			
SB4-10(Total)	ND<10.7	5.1	155	53.6	6.5	74.6	ND<1.0	13.1	4860	1310	0.09	15.9	120	1.3	1.8	ND<1.0	15.2	39500	10300	19000	1480
SB4-10(WET)	1.3	ND<0.5	4.9	2.7	0.72	1.7	ND<0.05	0.75	142	53.8	0.005	1.3	2.9	2.7	ND<0.05	ND<10	0.44	2740	315	903	98.2
SB4-15(Total)	196	11	36.7	ND<0.20	ND<0.49	4.8	ND<1.0	1.7	21.4	ND<4.9	0.04	ND<2.0	ND<3.9	17	ND<0.98	ND<1.0	7.1	36.9	2200	4260	93.6
SB4-15(WET)	41													0.02							
SB4-30(Total)	180	61	23	0.16	0.09	5	ND<1.0	1.4	6.5	1.0	0.04	0.7	5.3	19	ND<0.05	ND<1.0	7.1	9.4	4500	5300	77
SB4-30(WET)	36	5.1												0.13							
-----																					
SB5-5(Total)	ND<11.8	2.8	129	49	5.4	19.5	ND<1.0	13.2	4190	1100	0.09	18.3	116	1	3.3	ND<1.0	13.5	38200	9260	16800	1720
SB5-5(WET)	3.3	ND<0.5	4	2.4	1.7	1.1	ND<0.05	0.68	166	97.4	ND<0.005	1.5	3.7	ND<1	ND<0.05	ND<10	0.42	4040	281	816	101
SB5-18(Total)	ND<4.9	1500	41.3	0.2	ND<0.49	12	ND<1.0	2.8	19.9	5	0.02	ND<2.0	6	ND<0.1	ND<0.98	ND<1.0	15.7	31.1	6560	9340	85.4
SB5-18(WET)		140																			
-----																					
SB6-5(Total)	17	16	138	21.2	8.6	10	ND<1.0	3.6	53800	713	0.80	4	80.5	1	3.1	ND<1.0	8.4	41400	6420	19400	696
SB6-5(WET)	7.4	0.91	6.1	1.5	1.5	0.63	ND<0.05	0.57	178	49	ND<0.005	0.7	2.8	1.6	ND<0.05	ND<10	0.61	2460	272	1040	53.9
SB6-15(Total)	ND<4.9	220	49.4	0.32	ND<0.49	5.9	ND<1	4.0	13.5	ND<4.9	ND>0.02	ND<2	6.30	ND<0.1	ND<0.99	ND<1.0	13.2	23.7	4710	5310	283
SB6-15(WET)		48																			
SB6-20(Total)		0.6																			
SB6-25(Total)		13																			
SB6-30(Total)	ND<4.9	2.4	6.9	ND<0.2	ND<0.49	3.3	ND<1.0	ND<0.99	10.5	ND<4.9	ND<0.02	ND<2.0	ND<4.0	ND<1.0	ND<0.99	ND<1.0	5.3	15.7	1220	2270	16.2

TABLE 6.1 (continued page 3)  
RESULTS OF LABORATORY ANALYSES

Sample	Sb	As	Ba	Be	Ed	Cr	Cr HEX	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	V	Zn	Al	Fe	Mn
Totals	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
WET	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
TTLC	500	500	10000	75	100	500		8000	2500	1000	20	3500	2000	100	500	700	2400	5000			
STLC	15	5	100	0.75	1	5		80	25	5	0.2	350	20	1	5	7	24	250			
SB8-10(Total)	1000	1.1	63	30	1.3	16	ND<1.0	5.9	1800	440	0.06	5.1	43	2.3	3.7	ND<1.0	4.6	22000	8100	16000	1700
SB8-10(WET)	290	0.12	5.9	4.3	ND<0.2	0.6	ND<0.05	0.81	ND<0.5	39	ND<0.005	0.45	6.2	ND<0.01	ND<0.2	ND<0.3	ND<0.2	2400	400	1100	200
SB9-3(Total)	120	17	100	44	2.3	11	ND<1.0	9.2	3200	1200	0.14	9.3	90	0.5	2.5	ND<1.0	6.2	25000	12000	23000	2200
SB9-3(WET)	89	0.04	6.6	4.2	ND<0.2	ND<0.2	ND<0.05	1.2	30	97	ND<0.005	1	5.2	0.05	ND<0.2	ND<0.3	ND<0.2	3500	360	1100	150
SB10-10(Total)	ND<1.0	0.68	44	16	0.79	5.6	ND<1.0	5.3	1900	800	0.02	5.7	44	0.3	0.52	ND<1.0	3.4	24000	6000	9800	1500
SB10-10(WET)	ND<1.0	0.19	5.6	2.5	ND<0.2	0.94	ND<0.05	0.72	150	120	ND<0.005	1	5.1	0.06	ND<0.2	ND<0.3	0.22	3200	380	1100	150
SB10-16(Total)	370	19	38	5.3	0.33	5.1	ND<1.0	2.7	300	110	ND<0.02	2.4	12	22	0.11	ND<1.0	6.4	4000	3400	5400	290
SB10-16(WET)	27	0.046							7.7	2.6				0.03				110			
SB10-30(Total)	240	180	31	0.17	0.08	4.8	ND<1.0	1.8	3.8	1.6	0.03	0.57	5.1	53	ND<0.05	ND<1.0	6.7	9.7	3400	5400	110
SB10-30(WET)	17	14												0.31							
SB10-35(Total)	92	82																			
SB10-40(Total)	40	100																			

SB10-30  
AS  
==

TABLE 6.2  
RESULTS OF LABORATORY ANALYSES

Sample	Sb	As	Ba	Be	Cd	Cr	Cr HEX	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	V	Zn	Al	Fe	Mn
Totals	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
WET	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
TTLC	500	500	10000	75	100	500		8000	2500	1000	20	3500	2000	100	500	700	2400	5000			
STLC	15	5	100	0.75	1	5		80	25	5	0.2	350	20	1	5	7	24	250			
MW4-5(Total)	5.2	2.3	33.7	ND<0.19	ND<0.49	7.5	ND<1.0	2.6	11.3	16.0	0.03	ND<1.9	8.8	ND<0.1	ND<0.97	ND<1.0	16.3	25	2510	5640	68.8
MW4-20(Total)	ND<4.8	430	25.1	ND<0.19	ND<0.48	5	ND<1.0	1.9	8.8	ND<4.8	0.02	ND<1.9	4.8	ND<0.1	ND<0.97	ND<1.0	8.2	13.1	2630	4310	95.6
MW4-20(WET)		54																			
MW4-20xx(Total)	19.5	350	30	ND<0.19	ND<0.48	5.3	ND<1.0	2.4	27.5	ND<4.8	0.22	ND<1.9	3.9	0.1	ND<0.97	ND<1.0	8.9	25.4	2780	4730	94.9
MW4-25(Total)		94																			
MW4-30(Total)		58																			
MW5-5(Total)	1780	1300	52.6	ND<0.2	0.78	7.3	ND<1.0	3.5	45.7	13.1	5.8	ND<2.0	9.6	300	1	ND<1.0	12.5	76.5	2980	7140	134
MW5-5(WET)	380	82																			
MW5-10(Total)	ND<1	2.5												ND<0.10							
MW5-15(Total)	ND<1	1.3												ND<0.10							
MW5-20(Total)	ND<5.0	45	11.1	ND<0.2	ND<0.5	4.3	ND<1.0	1.5	9.7	ND<5.0	ND<0.02	ND<2.0	ND<4.0	ND<0.1	ND<0.99	ND<1	7.1	14.1	1880	3200	44
		0.036																			
MW6-5(Total)	ND<1.0	1.3	29	0.21	0.1	5.47	ND<1.0	2.48	7.53	1.66	0.02	0.09	4.35	ND<0.1	ND<0.05	ND<1.0	11	16	8100	6100	150.00
MW6-20(Total)	ND<1.0	3.9	13	0.07	0.07	2.97	ND<1.0	0.83	5.41	1.11	0.03	0.11	2.94	ND<0.1	ND<0.05	ND<1.0	3.92	14	1700	3500	34
MW7-5(Total)	ND<1.0	1.3	14	0.13	ND<0.05	3.6	ND<1.0	1.4	4.6	1.4	0.02	0.05	3.3	ND<0.1	ND<0.05	ND<1.0	7.50	8.9	2300	4700	50
MW7-20(Total)	ND<1.0	0.95	6.1	ND<0.05	ND<0.05	1.5	ND<1.0	0.47	12	0.54	0.02	0.05	2.0	ND<0.1	ND<0.05	ND<1.0	2.3	15	690	1800	20
MW7-20A(Total)	ND<1.0	0.98	6.7	ND<0.05	ND<0.05	1.9	ND<1.0	0.53	7.6	0.59	0.02	0.05	2.1	ND<0.1	ND<0.05	ND<1.0	2.5	7.1	840	1900	22
MW8-5(Total)	ND<1.0	1.9	19	0.10	0.07	6.1	ND<1.0	2	3.6	1.1	ND>0.02	ND>0.05	3.2	ND<0.1	ND<0.05	ND<1.0	11	8.5	2700	8400	110
MW8-20(Total)	ND<1.0	1.3	9.8	0.06	ND<0.05	4.7	ND<1.0	0.87	7.5	1.8	ND>0.02	ND>0.05	2.9	ND<0.1	ND<0.05	ND<1.0	4.3	21	1100	2600	31

TABLE 6.3  
RESULTS OF LABORATORY ANALYSES

Sample	Sb	As	Ba	Be	Cd	Cr	Cr HEX	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	V	Zn	Al	Fe	Mn
Totals	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
WET	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
TTLC	500	500	10000	75	100	500		8000	2500	1000	20	3500	2000	100	500	700	2400	5000			
STLC	15	5	100	0.75	1	5		80	25	5	0.2	350	20	1	5	7	24	250			
B3-5(Total)	ND<1.0	0.96	28	0.14	0.08	6.1	ND<1.0	2.2	17	1.4	ND>0.02	0.11	4	ND<0.1	ND<0.05	ND<1.0	12	19	3400	9300	139
B3-20(Total)	ND<1.0	0.89	14	0.07	0.06	6.5	ND<1.0	1.3	13	0.86	ND>0.02	0.05	3.9	ND<0.1	ND<0.05	ND<1.0	6.8	9.8	2200	4000	55
B4-5(Total)	ND<1.0	0.92	27	0.13	0.08	5.8	ND<1.0	2.3	3.3	1.4	ND>0.02	0.08	3.8	ND<0.1	ND<0.05	ND<1.0	11	10	3200	7800	150
B4-20(Total)	ND<1.0	1.1	21	0.11	0.07	5.4	ND<1.0	1.8	6.7	1.4	0.02	0.1	3.6	ND<0.1	ND<0.05	ND<1.0	8.5	14	3100	5200	130
B5-5(Total)	ND<1.0	0.69	46	0.14	0.06	6.1	ND<1.0	2.5	4.4	1.4	ND<0.02	0.17	5.5	ND<0.1	ND<0.05	ND<1.0	10	11	3400	7500	150
B5-20(Total)	ND<1.0	1.2	30	0.19	0.07	9.3	ND<1.0	3.5	4.4	1.5	ND<0.02	0.16	5.9	ND<0.1	ND<0.05	ND<1.0	13	12	5000	8100	170
B5-20A(Total)	ND<1.0	1.4	33	0.21	0.08	10	ND<1.0	3.5	4.4	1.6	ND<0.02	0.14	5.9	ND<0.1	ND<0.05	ND<1.0	14	12	5200	8400	180
B6-5(Total)	ND<1.0	270	26	0.16	ND<0.05	4.7	ND<1.0	3.2	6.4	1.3	0.05	0.17	4.4	ND<0.1	ND<0.05	ND<1.0	9.7	14	3000	5900	150
B6-5(WET)		17																			
B6-20(Total)	ND<1.0	5.9	11	0.06	ND<0.05	3.1	ND<1.0	0.7	2.6	0.79	0.02	0.1	2.8	ND<0.1	ND<0.05	ND<1.0	3.8	5.2	1200	2500	24
B6-20A(Total)	ND<1.0	1.2	19	0.13	ND<0.05	5	ND<1.0	1.2	4.8	1.1	ND<0.02	0.17	4.1	ND<0.1	ND<0.05	ND<1.0	6.5	9	2700	3800	60

TABLE 6.4  
RESULTS OF LABORATORY ANALYSES

Sample	Sb	As	Ba	Be	Cd	Cr	Cr HEX	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	V	Zn	Al	Fe	Mn
Totals	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
WET	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
TTLC	500	500	10000	75	100	500		8000	2500	1000	20	3500	2000	100	500	700	2400	5000			
STLC	15	5	100	0.75	1	5		80	25	5	0.2	350	20	1	5	7	24	250			
HB1-1(Total)	2.8	1.5	32	0.23	0.06	5	ND<1.0	1.8	21	4	0.06	0.59	4.4	ND<0.1	0.14	ND<1.0	8.8	46	1800	4600	500
HB1-5(Total)	ND<1.0	0.99	36	0.14	ND<0.05	5.3	ND<1.0	2.2	9.9	2.6	ND<0.02	0.26	4	ND<0.1	ND>0.05	ND<1.0	7.9	16	2200	4300	110
HB2-1(Total)	25	6.3	28	0.16	2.1	12	ND<1.0	3.1	22	7.5	0.26	7.6	22	0.1	0.09	ND<1.0	9.7	67	2600	12000	180
HB2-5(Total)	9	47	21	0.12	0.14	4.8	ND<1.0	2.4	8.7	55	0.15	0.2	4	ND<0.1	0.15	ND<1.0	8	14	1900	4100	87
HB2-5(WET)																					
HB3-1(Total)	ND<1.0	0.98	23	0.15	0.05	4.1	ND<1.0	1.8	2.8	1.5	ND<0.02	1.1	3.2	ND<0.1	ND<0.05	ND<1.0	9.9	8.2	3100	5300	110
HB3-5(Total)	ND<1.0	1.2	13	0.11	ND<0.05	3	ND<1.0	1.1	23	1.6	0.03	0.25	2.2	ND<0.1	ND<0.05	ND<1.0	6.4	16	1900	3600	39
HB4-1(Total)	17.1	24	63.1	1	0.8	10.6	ND<1.0	5.2	613	77.7	0.07	ND<2.0	20.4	1.6	ND<0.98	ND<1.0	15.6	847	ND<9.8	6320	263
HB4-1(WET)									6.6	3.2								90			
HB4-5(Total)	30.8	480	34.5	ND<0.2	ND<0.5	4.1	ND<1.0	2.1	10.7	ND<5.0	0.04	ND<2.0	ND<4	0.09	ND<0.99	ND<1.0	8.8	19	1780	3970	150
HB4-5(WET)		57																			
HB5-1(Total)	334	79	58.8	0.84	2.1	36	ND<1.0	3.6	196	118	0.07	3.1	7.5	5.6	ND<0.99	ND<1.0	10.8	1020	3020	5390	169
HB5-1(WET)	28	3.1																			
HB5-5(Total)	87.8	20	22.5	ND<0.19	ND<0.48	4.1	ND<1.0	2.3	9.9	ND<4.8	0.11	ND<1.9	3.9	120	ND<0.96	ND<1.0	6.3	46.6	1590	3340	55.6

TABLE 6.5.1  
RESULTS OF LABORATORY ANALYSES

Sample	Sb mg/L	As mg/L	Ba mg/L	Be mg/L	Cd mg/L	Cr mg/L	Cr HEX mg/L	Co mg/L	Cu mg/L	Pb mg/L	Hg mg/L	Mo mg/L	Ni mg/L	Se mg/L	Ag mg/L	Tl mg/L	V mg/L	Zn mg/L	Al mg/L	Fe mg/L	Mn mg/L
MCL's		0.05	1		0.01	0.05				0.05	0.002			0.01	0.05						
MW1	ND<0.1	3.2	ND<0.02	ND<0.01	ND<0.01	ND>0.02	ND<0.05	ND<0.02	ND<0.05	ND<0.05	ND<0.001	ND<0.02	0.02	0.02	ND<0.01	ND<0.3	ND<0.02	ND<0.02	0.17	ND<0.05	0.06
MW2	ND<0.1	12	ND<0.02	ND<0.01	ND<0.01	0.21	0.17	ND<0.02	ND<0.05	ND<0.05	ND<0.001	0.05	0.06	0.24	ND<0.01	ND<0.3	0.05	0.04	0.49	0.15	3.3
MW3	0.84	9.8	0.07	ND<0.01	ND<0.01	ND>0.02	ND<0.05	ND<0.02	ND<0.05	ND<0.05	ND<0.001	ND<0.02	ND<0.02	0.19	ND<0.01	ND<0.3	0.04	0.03	0.51	0.05	ND<0.02
MW4	ND<0.1	0.005	0.49	ND<0.01	ND<0.01	0.1	0.09	ND<0.02	ND<0.05	ND<0.05	ND<0.001	ND<0.02	ND<0.02	ND<0.01	ND<0.01	ND<0.3	ND<0.02	ND<0.02	1.1	ND<0.05	ND<0.02
MW5	ND<0.1	140	0.03	ND<0.01	ND<0.01	ND>0.02	ND<0.05	ND<0.02	ND<0.05	ND<0.05	ND<0.001	0.1	0.03	0.02	ND<0.01	ND<0.3	0.13	0.02	0.6	0.41	0.08
MW6	ND<0.1	25	0.03	ND<0.01	ND<0.01	0.23	0.23	ND<0.02	ND<0.05	ND<0.05	ND<0.001	0.05	0.07	0.03	ND<0.01	ND<0.3	0.04	0.11	1.9	1.8	1.9
MW7																					
MW8	ND<0.1	ND<0.005	0.03	ND<0.01	ND<0.01	0.02	ND<0.05	ND<0.02	ND<0.05	ND<0.05	ND<0.001	ND<0.02	0.06	0.01	ND<0.01	ND<0.3	ND<0.02	0.04	2.2	2.1	0.42
FIELD BLANK MW9	ND<0.1	ND<0.005	ND<0.02	ND<0.01	ND<0.01	ND>0.02	ND<0.05	ND<0.02	ND<0.05	ND<0.05	ND<0.001	ND<0.02	0.03	ND<0.01	ND<0.01	ND<0.3	ND<0.02	ND<0.02	ND<0.1	ND<0.05	ND<0.02

TABLE 6.5.2  
RESULTS OF LABORATORY ANALYSES

Sample	PCE	TCE	TOLUENE	XYLENES	ETHYL- BENZENE	ACETONE 2- BUTANONE	11-DCE	111-TCA	TRICHLOROFLUORO- METHANE	CARBON- TETRACHLORIDE	
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
MW1	200	370	ND<5	ND<5	ND<5	ND<10	ND<10	19	12	ND<5	ND<5
MW2	16	40	18	ND<5	ND<5	ND<10	ND<10	ND<5	ND<5	ND<5	ND<5
MW3	160	120	6	ND<5	ND<5	ND<10	ND<10	ND<5	ND<5	ND<5	ND<5
MW4	ND<5	190	39	40	6	74	12	ND<5	ND<5	ND<5	ND<5
MW5	ND<5	18	270	300	39	ND<10	ND<10	ND<5	ND<5	ND<5	ND<5
MW6	ND<5	110	ND<5	ND<5	ND<5	ND<10	ND<10	8	10	73	43
MW7											
MW8	25	88	ND<5	ND<5	ND<5	ND<10	ND<10	5	ND<5	ND<5	ND<5
FIELD BLANK MW9	ND<5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<10	ND<5	ND<5	ND<5	ND<5



TABLE 6.6  
MONITORING WELLS REFERENCE ELEVATIONS, DEPTHS TO  
GROUNDWATER (12/15/89 and 1/9/90), AND GROUNDWATER ELEVATIONS

Well	Reference Elevation (feet above MSL)	Depth to Water(12/15/89) (feet)	Groundwater Elevation (feet above MSL)	Depth to Water(1/9/90) (feet)	Groundwater Elevation (feet above MSL)
W-1	102.06	82.70	19.36	82.72	19.34
W-2	98.79	81.82	16.97	81.80	16.99
W-3	94.17	71.83	22.34	71.52	22.65
MW-4	92.17	71.40	20.77	71.45	20.72
MW-5	92.75	76.94	15.81	77.03	15.72
MW-6	98.15	81.95	16.20	81.86	16.29
MW-7	107.90	89.70	18.20	89.72	18.18
MW-8	102.38	85.44	16.94	85.44	16.94

## APPENDIX

**APPENDIX A - BORING LOGS**

**APPENDIX B - LABORATORY REPORTS AND  
CHAIN-OF-CUSTODY FORMS**



**Site Characterization  
Report for the  
H. Kramer & Company  
Facility,  
El Segundo, California**

**Submitted to: EPA Region IX**

**Prepared for: Alschuler, Grossman & Pines,  
Counsel for H. Kramer & Company**

**Prepared by: ENSR Consulting and Engineering**

**February, 1990**

**Document No. 9500-089-600**



**SECTION 1**

## SUBSURFACE EXPLORATION

## LITHOLOGIC LOG OF SB-1A

Client : KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : SB-1A  
 Logged By : K. PITCHFORD, C.E.G.  
 Approved By :  
 Drilled By : IT CORPORATION

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11/13/89 Date Completed : 11/13/89  
 Method : HSA Total Depth : 11 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : Length :  
 Slot Size : Type :  
 Casing Dia : Length :

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	PID*	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
	FILL	1	SS	0	NA	NA	NA			
5	SANDY GRAVEL (GW) dark gray to black, dry to damp, smelter slag, with minor brick, concrete, wood, and metal fragments, occasional coarse boulder sized slag fragments	5	SS	0	NA	NA	NA			
10		10	SS	0	NA	NA	NA			
15	Boring terminated at 11 feet due to auger refusal. No free groundwater encountered. Boring backfilled with concrete to ground surface.									
20										
25										
30										
35										
40										
45										
50										
55	* PID: PHOTO-IONIZATION DETECTOR VALUE (eV)									

### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## ENSR CONSULTING & ENGINEERING

### SUBSURFACE EXPLORATION

### LITHOLOGIC LOG OF SB-1B

Client : KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : SB-1B  
 Logged By : K. PITCHFORD, C.E.G.  
 Approved By :  
 Drilled By : IT CORPORATION

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11/13/89 Date Completed : 11/13/89  
 Method : HSA Total Depth : 40 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : . Length : .  
 Slot Size : . Type : .  
 Casing Dia : . Length : .

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	PID *	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
5	FILL SANDY GRAVEL (GW) dark gray to black, dry to damp, smelter slag, with minor brick, concrete, wood, and metal fragments, occasional coarse boulder sized fragments									
10										
15	SANDY/SILTY CLAY (CL) dark brown, wet to saturated, fine to medium grained sand, no staining or odors	15	SS	NA	NA	NA	NA			
20		20	SS	NA	NA	NA	NA			
25	SAND (SP) light to medium brown, dry to damp, fine to medium grained sand, no staining or odors	25	SS	NA	NA	NA	NA			
30		30	SS	NA	NA	NA	NA			
35										
40	Bottom of boring at 40 feet. Boring backfilled with concrete to ground surface.	40	SS	NA	NA	NA	NA			
45										
50										
55	* PID: PHOTO-IONIZATION DETECTOR VALUE (eV)									

#### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

#### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## ENSR CONSULTING & ENGINEERING

### SUBSURFACE EXPLORATION

### LITHOLOGIC LOG OF SB-2

Client : H. KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : SB-2  
 Logged By : K. PITCHFORD, C.E.G.  
 Approved By :  
 Drilled By : IT CORPORATION

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11/14/89 Date Completed : 11/14/89  
 Method : HSA Total Depth : 19.5 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : . Length : .  
 Slot Size : . Type : .  
 Casing Dia : . Length : .

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	PID *	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
	FILL									
	SAND (SP) dark brown to black slag, dry to damp, loose, coarse grained sand size material with minor gravel									
5		5	SS	NA	NA	NA	NA			
10		10	SS	NA	NA	NA	NA			
15		15	SS	NA	NA	NA	NA			
	SILTY CLAY (CL) dark gray, cohesive, plastic, grades to fine SANDY CLAY (CL)	16	SS	NA	NA	NA	NA			
		18	SS	NA	NA	NA	NA			
20	Bottom of boring at 19.5 feet. Perched groundwater encountered at 15.5 feet. Boring backfilled with concrete to ground surface.									
25										
30										
35										
40										
45										
50										
55	* PID: PHOTO-IONIZATION DETECTOR VALUE (eV)									

11/14/89

#### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

#### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING



## SUBSURFACE EXPLORATION

## LITHOLOGIC LOG OF SB-3

Client : H. KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : SB-3  
 Logged By : B. LEEVER  
 Approved By : K. PITCHFORD, C.E.G.  
 Drilled By : GROUNDWATER TECHNOLOGY, INC.

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11-16-89 Date Completed : 11-16-89  
 Method : HSA Total Depth : 45.5 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : . Length : .  
 Slot Size : . Type : .  
 Casing Dia : . Length : .

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	PID *	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
5	FILL SAND (SW) dark brown coarse sand, with abundant dark gray to black slag fragments to coarse sand size. Fill material includes: wood, fragments, metals, glass, brick, and other minor debris. Dry.	5	SS	0.5	30	NA	1443			
10	continued FILL, increased slag content (80%), continued debris, becomes dry to damp, gravelly to cobbly material encountered as indicated by drill chatter.	10	SS	1.5	50+	4.2	1450			
15	continued FILL, becomes dark brown SILTY/CLAYEY SAND (SW) to SANDY SILT (ML) contains abundant wood fragments and coarse sand size slag fragments, very moist to saturated, grades to CLAYEY SILT (ML) dark brown, with minor fine sand, cohesive, slightly plastic	15	SS	1.5	NA	12.8	1500			
		16	SS	1.5	NA	20	1507			
		18	SS	1.5	NA	NA	1515			
		19	SS	1.5	NA	NA	1522			
20	SAND (SP) tan to brown, moist to wet, dense, very fine to fine sand with trace of silt and clay,	20	SS	1.5	NA	17.1	1539			
25	grades downward to fine to medium grained sand with diminishing fines, increased moisture content.	25	SS	1.5	41	25.8	1550			
30		30	SS	1.5	36	11.1	1600			
35	continued SAND (SP) as above	35	SS	1.5	40	10.1	1605			
40		40	SS	1.5	50+	16.1	1640			
45	Bottom of boring at 45.5 feet. No free groundwater encountered. Boring backfilled with concrete to ground surface.	45	SS	0.5	NA	NA	1700			
50										
55	* PID: PHOTO-IONIZATION DETECTOR VALUE (eV)									

### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## ENSR CONSULTING &amp; ENGINEERING

## SUBSURFACE EXPLORATION

## LITHOLOGIC LOG OF SB-4

Client : H. KRAMER  
Project Name : SITE ASSESSMENT  
Project Location : EL SEGUNDO, CA  
Job Number : 9500-089 Boring No : SB-4  
Logged By : B. LEEVER  
Approved By : K. PITCHFORD, C.E.G.  
Drilled By : GROUNDWATER TECHNOLOGY, INC.

DRILLING AND SAMPLING INFORMATION  
Date Started : 11/17/89 Date Completed : 11/17/89  
Method : HSA Total Depth : 45.5 FEET  
WELL COMPLETION INFORMATION  
Screen Dia : . Length : .  
Slot Size : . Type : .  
Casing Dia : . Length : .

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	PID *	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
	FILL									
5	SAND (SW) sandy fill material is black, damp, loose, very fine to very coarse grained slag material with minor amounts of pebble size material. Also contains wood, brick, glass, and other unidentifiable material.	5	SS	1.0	8	44.8	0903			
10	continued FILL material	10	SS	1.0	28	12.0	0913			
15	SAND (SP) gray to brown, damp to saturated, dense, very fine to fine grained sand with some silt	15	SS	1.1	7	19.5	0927			
		16	SS	0.8	16	NA	0935			
20	continued SAND (SP)	20	SS	1.5	25	19.5	0943			
25		25	SS	1.5	24	20.0	0951			
30		30	SS	1.5	37	30.0	1001			
35	continued SAND (SP) orange to tan, damp, dense, grades downward to fine to coarse grained sand	35	SS	1.5	50+	13.1	1008			
40	continued SAND (SW) tan, damp, dense, becomes very fine to fine grained sand	40	SS	1.5	44	13.2	1017			
45	continued SAND (SW) tan, damp, dense, very fine to fine sand with trace very coarse grained sand	45	SS	1.5	49	14.5	1026			
50	Bottom of boring at 45.5 feet. No free groundwater encountered. Boring backfilled with concrete to ground surface.									
55	* PID: PHOTO-IONIZATION DETECTOR VALUE (eV)									

## SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

## BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## SUBSURFACE EXPLORATION

## LITHOLOGIC LOG OF SB-5

Client : H. KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : SB-5  
 Logged By : B. LEEVER  
 Approved By : K. PITCHFORD, C.E.G.  
 Drilled By : GROUNDWATER TECHNOLOGY, INC.

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11-17-89 Date Completed : 11-17-89  
 Method : HSA Total Depth : 20.5 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : Length :  
 Slot Size : Type :  
 Casing Dia : Length :

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	PID *	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
5	FILL SAND (SP) black, damp, loose, fine to very coarse grained sand size material consisting of brick, glass, red slag, wood, and other unidentifiable material.	5	SS	1.0	12	19.1	1118			
10		10	SS	1.0	50	20.5	1250			
15	continued FILL material with strong fecal odor. Saturated.	15	SS	1.5	1	NA	1307			
		16	SS	1.5	NA	NA	1315			
		18	SS	1.5	16	NA	1330			
20	SILTY SAND (SM) orange to brown, damp, very dense, v.fine-fine sand <del>SAND (SP) orange to tan, damp, dense, fine to coarse grained</del> Bottom of boring terminated at 20 feet, due to perched water from 15 to 18 feet. Boring backfilled with bentonite from 20 to 15 feet, and with concrete from 15 feet to ground surface.	20	SS	1.5	27	NA	1350			
25										
30										
35										
40										
45										
50										
55	* PID: PHOTO-IONIZATION DETECTOR VALUE (eV)									

### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## ENSR CONSULTING &amp; ENGINEERING

## SUBSURFACE EXPLORATION

## LITHOLOGIC LOG OF SB-6

Client : H. KRAMER  
Project Name : SITE ASSESSMENT  
Project Location : EL SEGUNDO, CA  
Job Number : 9500-089 Boring No : SB-6  
Logged By : B. LEEVER  
Approved By : K. PITCHFORD, C.E.G.  
Drilled By : GROUNDWATER TECHNOLOGY, INC.

DRILLING AND SAMPLING INFORMATION  
Date Started : 11-17-89 Date Completed : 11-17-89  
Method : HSA Total Depth : 45.5 FEET  
WELL COMPLETION INFORMATION  
Screen Dia : Length :  
Slot Size : Type :  
Casing Dia : Length :

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	PID *	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
5	FILL SAND (SP) black, moist, dense, sandy fill material contains wood, brick, glass, and slag debris.	5	SS	1.2	40	17.1	1445			
10	continued FILL material, gray to black, damp to saturated, becomes finer grained	10	SS	0.7	9	NA	1455			
15	CLAY (CL) black to gray, very stiff, strong organic odor	15	SS	1.5	25	20.5	1510			
20	CLAYEY SILT (ML) gray green to brown, damp, stiff, no odor, clayey silt with minor fine sand	20	SS	1.5	15	16.0	1522			
25	SAND (SP) orange to brown, damp, dense, very fine to medium grained sand with minor silt	25	SS	1.5	32	13.1	1530			
30	continued SAND (SP) tan to orange, damp, dense, grades to very fine to fine grained sand	30	SS	1.5	16	13.2	1539			
35		35	SS	1.5	50+	10.0	1545			
40	continued SAND (SP) as above	40	SS	1.5	47	9.6	1555			
45		45	SS	1.5	46	9.8	1605			
50	Bottom of boring at 45.5 feet. No free groundwater encountered. Boring backfilled with concrete to ground surface.									
55	* PID: PHOTO-IONIZATION DETECTOR VALUE (eV)									

## SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

## BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## ENSR CONSULTING & ENGINEERING

### SUBSURFACE EXPLORATION

### LITHOLOGIC LOG OF SB-8

Client : KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : SB-8  
 Logged By : K. PITCHFORD, C.E.G.  
 Approved By : K. PITCHFORD, C.E.G.  
 Drilled By : IT CORPORATION

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11/22/89 Date Completed : 11/22/89  
 Method : HSA Total Depth : 11 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : . Length : .  
 Slot Size : . Type : .  
 Casing Dia : . Length : .

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	PID *	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
	FILL									
	SANDY GRAVEL - GRAVELLY SAND (GM) dark brown to black, moisture content increases from dry to damp with depth, slightly cohesive,									
5	slag with wood, paper, and metal debris	5	SS	0.2	NA	NA	NA			
10		10	SS	0.2	NA	NA	0800			
	Boring terminated at 11 feet due to auger refusal. No free liquids encountered.									
15										
20										
25										
30										
35										
40										
45										
50										
55	* PID: PHOTO-IONIZATION DETECTOR VALUE (eV)									

#### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

#### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## ENSR CONSULTING & ENGINEERING

### SUBSURFACE EXPLORATION

### LITHOLOGIC LOG OF SB-9

Client : KRAMER

Project Name : SITE ASSESSMENT

Project Location : EL SEGUNDO, CA

Job Number : 9500-089 Boring No : SB-9

Logged By : K. PITCHFORD, C.E.G.

Approved By :

Drilled By : IT CORPORATION

#### DRILLING AND SAMPLING INFORMATION

Date Started : 11/22/89 Date Completed : 11/22/89

Method : HSA Total Depth : 3 FEET

#### WELL COMPLETION INFORMATION

Screen Dia : Length :

Slot Size : Type :

Casing Dia : Length :

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA							
	FILL							
	SILTY/SANDY GRAVEL (GM) dark brown to black, dry, with minor wood, paper, and metal fragments							
5	Boring terminated at 3 feet due to auger refusal. No free liquids encountered.							
10								
15								
20								
25								
30								
35								
40								
45								
50								
55								

#### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON  
ST - PRESSED SHELBY TUBE

RC - ROCK CORE  
CT - CONTINUOUS TUBE

#### BORING METHOD

HSA - HOLLOW STEM AUGER  
CFA - CONTINUOUS FLIGHT AUGERS

DC - DRIVING CASING  
MD - MUD DRILLING

## SUBSURFACE EXPLORATION

## LITHOLOGIC LOG OF SB-10

Client : KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : SB-10  
 Logged By : K. PITCHFORD, C.E.G.  
 Approved By :  
 Drilled By : IT CORPORATION

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11/22/89 Date Completed : 11/22/89  
 Method : HSA Total Depth : 45.5 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : Length :  
 Slot Size : Type :  
 Casing Dia : Length :

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	PID *	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
5	FILL SILTY/SANDY GRAVEL (GM) dark brown to black, dry to damp, loose, slag with minor wood, paper, rags, and metal debris, Trace of sulphur near surface.	5	SS	0.5	NA	NA	0850			
10		10	SS	0	NA	NA	0900			
		11	SS	1.5	NA	NA	0915			
15		15	SS	NA	NA	NA	NA			
	SILTY SAND (SM) orange to brown, damp, dense, silty very fine to medium grained sand, no staining or odors.	16	SS	NA	NA	NA	NA			
		17	SS	NA	NA	NA	NA			
20		19	SS	1.5	NA	NA	NA			
25		25	SS	1.5	NA	NA	NA			
30		30	SS	1.5	NA	NA	NA			
35		35	SS	1.5	NA	NA	NA			
40		40	SS	1.5	NA	NA	NA			
45		45	SS	1.5	NA	NA	NA			
	Bottom of boring at 45.5 feet. No free groundwater encountered.									
50										
55	* PID: PHOTO-IONIZATION DETECTOR VALUE (eV)									

SAMPLER TYPE  
 SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

BORING METHOD  
 HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## SECTION 2



## SUBSURFACE EXPLORATION

## LITHOLOGIC LOG OF B-3

Client : H. KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : B-3  
 Logged By : B. LEEVER  
 Approved By : K. PITCHFORD, C.E.G.  
 Drilled By : GROUNDWATER TECHNOLOGY, INC.

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11-14-89 Date Completed : 11-14-89  
 Method : HSA Total Depth : 48.5 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : . Length : .  
 Slot Size : . Type : .  
 Casing Dia : . Length : .

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	PID	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
5	Asphaltic Concrete upper 3-inches SILTY SAND (SM) reddish brown, damp, dense, silty very fine to medium grained sand	5	SS	1.2	20	32.1	0830			
10	SAND (SW) reddish brown, damp, dense, very fine to coarse grained sand	10	SS	1.2	20	25.2	0838			
15		15	SS	1.5	29	18.5	0848			
20		20	SS	1.1	35	18.5	0858			
25	continued SAND (SP/SW) grades downward to a fine to medium grained sand	25	SS	1.4	33	20.4	0910			
30		30	SS	1.5	50	44.1	0925			
35	continued SAND (SP/SW) grades to a fine to coarse grained sand	35	SS	1.3	50+	30.2	0938			
40		40	SS	1.5	50+	18.8	0954			
45	continued SAND (SP/SW) becomes tan, fine to coarse grained sand	45	SS	1.3	50	17.2	1012			
50	Bottom of 15 degree angle boring at 48.5 vertical feet. No free groundwater encountered. Boring backfilled with concrete to ground surface.	50	SS	1.5	50+	14.3	1027			
55	* PID: PHOTO-IONIZATION DETECTOR VALUE (eV)									

### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## SUBSURFACE EXPLORATION

## LITHOLOGIC LOG OF B-4

Client : H. KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : B-4  
 Logged By : B. LEEVER  
 Approved By : K. PITCHFORD, C.E.G.  
 Drilled By : GROUNDWATER TECHNOLOGY, INC.

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11-14-89 Date Completed : 11-14-89  
 Method : HSA Total Depth : 48.5 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : Length :  
 Slot Size : Type :  
 Casing Dia : Length :

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	* PID	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
5	Asphaltic Concrete upper 4-inches SILTY SAND (SM) dark reddish brown, damp, dense, silty very fine to medium grained sand	5	SS	1.4	17	78.5	1319			
10		10	SS	1.5	19	80.0	1325			
15		15	SS	1.3	26	58.5	1335			
20		20	SS	1.4	40	NA	1345			
25	SAND (SP) tan, damp, dense, very fine to medium grained sand with minor silt	25	SS	1.5	50+	38.5	1352			
30		30	SS	1.5	50+	18.6	1405			
35	continued SAND (SP/SW) becomes slightly coarser grained, fine to coarse grained sand	35	SS	1.5	50+	21.9	1420			
40		40	SS	1.5	50+	25.3	1432			
45		45	SS	1.5	50+	22.6	1457			
50	Bottom of 15 degree angle boring at 48.5 vertical feet. No free groundwater encountered. Boring backfilled with concrete to ground surface.	50	SS	1.5	50+	22.0	1515			
55	* PID: PHOTO-IONIZATION DETECTOR VALUE (eV)									

### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## ENSR CONSULTING & ENGINEERING

### SUBSURFACE EXPLORATION

### LITHOLOGIC LOG OF B-5

Client : H. KRAMER  
Project Name : SITE ASSESSMENT  
Project Location : EL SEGUNDO, CA  
Job Number : 9500-089 Boring No : B-5  
Logged By : B. LEEVER  
Approved By : K. PITCHFORD, C.E.G.  
Drilled By : GROUNDWATER TECHNOLOGY, INC.

DRILLING AND SAMPLING INFORMATION  
Date Started : 11-15-89 Date Completed : 11-15-89  
Method : HSA Total Depth : 48.5 FEET  
WELL COMPLETION INFORMATION  
Screen Dia : . Length : .  
Slot Size : . Type : .  
Casing Dia : . Length : .

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	+ PID	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. BURBANK, CA									
5	Asphaltic Concrete upper 3-inches SILTY SAND (SM) brown, damp, slightly dense, silty very fine to medium grained sand	5	SS	1.5	9	18.3	0848			
10	continued SILTY SAND (SM) becomes light to reddish brown	10	SS	1.3	15	18.1	0855			
15		15	SS	1.2	22	14.7	0903			
20		20	SS	1.3	24	NA	0911			
25	SAND (SP) tan, damp, dense, slightly silty very fine to medium grained sand	25	SS	1.4	50+	12.1	0921			
30		30	SS	30	50+	10.4	0933			
40	continued SAND (SP)	40	SS	1.5	50+	10.4	0951			
50	continued SAND (SP) becomes very fine to fine grained sand	50	SS	1.5	50	2.3	1010			
55	Bottom of 15 degree angle boring at 48.5 vertical feet. No free groundwater encountered. Boring backfilled with concrete to ground surface. * PID: PHOTO-IONIZATION DETECTOR VALUE (eV)									

#### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

#### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## ENSR CONSULTING &amp; ENGINEERING

## SUBSURFACE EXPLORATION

## LITHOLOGIC LOG OF B-6

Client : H. KRAMER  
Project Name : SITE ASSESSMENT  
Project Location : EL SEGUNDO, CA  
Job Number : 9500-089 Boring No : B-6  
Logged By : B. LEEVER  
Approved By : K. PITCHFORD, C.E.G.  
Drilled By : GROUNDWATER TECHNOLOGY, INC.

DRILLING AND SAMPLING INFORMATION  
Date Started : 11-15-89 Date Completed : 11-15-89  
Method : HSA Total Depth : 48.5 FEET  
WELL COMPLETION INFORMATION  
Screen Dia : Length :  
Slot Size : Type :  
Casing Dia : Length :

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	+ PID	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
5	Asphaltic Concrete upper 4-inches SILTY SAND (SM) dark reddish brown, damp, slightly dense, silty very fine to fine grained sand	5	SS	1.1	9	0	1335			
10	continued SILTY SAND (SM) becomes light brown	10	SS	1.5	16	3.1	1343			
15	continued SILTY SAND (SM) becomes orange to brown	15	SS	1.5	43	1.4	1352			
20		20	SS	1.5	46	NA	1405			
25	SAND (SP) tan, damp, dense, very fine to medium grained sand with trace silt	25	SS	1.5	48	2.5	1410			
30		30	SS	1.5	31	2.1	1423			
35	continued SAND (SP) no silt									
40		40	SS	1.5	50+	2.7	1442			
45	continued SAND (SP) becomes tan									
50		50	SS	1.5	50	2.1	1504			
55	Bottom of 15 degree angle boring at 48.5 vertical feet. No free groundwater encountered. Boring backfilled with concrete to ground surface. * PID: PHOTO-IONIZATION DETECTOR VALUE (eV)									

## SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

## BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

### SECTION 3

## SUBSURFACE EXPLORATION

## LITHOLOGIC LOG OF MW-4

Client : KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : MW-4  
 Logged By : K. PITCHFORD, C.E.G.  
 Approved By :  
 Drilled By : IT CORPORATION

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11/20/89 Date Completed : 11/20/89  
 Method : HSA Total Depth : 105 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : 4 INCH Length : 30 FEET  
 Slot Size : 0.020 INCH Type : SCH 40 PVC  
 Casing Dia : 4 INCH Length : 45 FEET

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	PID *	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
5	asphaltic concrete upper 4 inches FILL SILTY SAND (SM) and SANDY/SILTY CLAY (CL) light to dark brown, slightly moist, contains minor slag fragments slight humic odor	6	SS	1.5	NA	16.1	0730			
10	SILTY SAND (SM) light to medium brown, slightly moist to moist, cohesive, semi-plastic at upper contact, silty fine grained sand with minor clay	11	SS	1.5	NA	17.3	NA			
15	increasing moisture with depth to wet or very moist	16	SS	1.5	NA	18.3	NA			
20	SAND (SP) brown, slightly moist to moist, clean, fine to medium grained sand with minor silt and clay									
25	continued SAND (SP) with decreasing silt content, fining sand fraction, and color transition from brown to gray	26	SS	1.5	NA	25.9	NA			
30		31	SS	1.5	NA	24.6	NA			
35										
40		41	SS	1.5	NA	48	0930			
45										
50	rounded, black, volcanic pebbles to 0.8 inch diameter encountered at 50 feet within organic fossil matter	51	SS	1.5	NA	57	0945			
55										

### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-4

Client : KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : MW-4  
 Logged By : K. PITCHFORD, C.E.G.  
 Approved By :  
 Drilled By : IT CORPORATION

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11/20/89 Date Completed : 11/20/89  
 Method : HSA Total Depth : 105 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : 4 INCH Length : 30 FEET  
 Slot Size : 0.020 INCH Type : SCH 40 PVC  
 Casing Dia : 4 INCH Length : 45 FEET

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	PID *	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
65	continued SAND (SP) with increased silt fraction from 65 feet to the top of the 75 foot clay zone	61	SS	1.5	NA	56.0	NA			
70	moderate petroleum hydrocarbon odor and tarry substance on auger flights when tripping-out 4 inch drill pipe becomes moist to very moist with possible saturation 1-2 feet above clay, as determined from sounding within augers	70	SS							11/20/89
75	CLAY (CL) dark gray to blue, moist to very moist, cohesive, plastic, clay with minor silt grades to a brown fine grained sandy clay									
80	CLAYEY SAND (ML) dark brown, fine grained clayey sand with silt	80	SS							
85	SILTY SAND (SM) light to medium brown, very moist to wet, silty fine to medium grained sand with minor clay									
90		90	SS							
105	Bottom of boring at 105 feet. Groundwater encountered at 74 feet. Boring backfilled with cement grout to 75 feet.									
110										
115										

SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## SUBSURFACE EXPLORATION

## LITHOLOGIC LOG OF MW-5

Client : KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO CA.  
 Job Number : 9500-089 Boring No : MW-5.  
 Logged By : K. PITCHFORD, C.E.G.  
 Approved By :  
 Drilled By : IT CORPORATION

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11/17/89 Date Completed : 11/17/89  
 Method : HSA Total Depth : 110 FEET.  
 WELL COMPLETION INFORMATION  
 Screen Dia : 4 INCH Length : 30 FEET  
 Slot Size : 0.020 INCH Type : SCH 40 PVC  
 Casing Dia : 4 INCH Length : 80 FEET

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	PID *	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA.									
5	Dark brown SILTY SAND (SM) with minor clay, fine to medium sand, contains root fragments, with humic odor. Drill location in grass lawn near tree. Soil is damp to moist. NOTE: Samples collected at 5 foot intervals, beginning at 6 feet due to geotechnical sampling and drill constraints.	6	SS			16.6	0800			
10	Dark brown SILTY CLAY(CL) with trace fine sand. Cohesive and plastic. Damp to wet.	11	SS			2.6				
15	Medium brown SANDY SILT to SILTY fine SAND (ML), with clay, damp, cohesive, slightly plastic	16	SS			8.5				
20	Light to medium brown, fine to medium grained SILTY SAND (SM) Damp, low cohesion, no plasticity	21	SS			2.0	0900			
25	Continuing as above with varying proportions of fines. Some random gray and orange mottling or mineral staining.	26	SS			2.7				
30		31	SS			1.4				
35										
40	Well graded medium to coarse SAND with trace SILT (SW). Damp, cohesionless. Mineral grains of quartzo-feldspathic minerals	41	S			2.3	0940			
45										
50	Light to medium brown SILTY fine SAND with trace CLAY (SM). Damp moderate cohesion. Random orange and gray mottling.	51	SS			4.0				
55										

### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING



## ENSR CONSULTING &amp; ENGINEERING

## SUBSURFACE EXPLORATION

## LITHOLOGIC LOG OF MW-5

Client : KRAMER

Project Name : SITE ASSESSMENT

Project Location : EL SEGUNDO, CA

Job Number : 9500-089 Boring No : MW-5

Logged By : K. PITCHFORD, C.E.G.

Approved By :

Drilled By : IT CORPORATION

## DRILLING AND SAMPLING INFORMATION

Date Started : 11/17/89 Date Completed : 11/17/89

Method : HSA Total Depth : 110 FEET

## WELL COMPLETION INFORMATION

Screen Dia : 4 INCH Length : 30 FEET

Slot Size : 0.020 INCH Type : PVC

Casing Dia : 4 INCH Length : 80 FEET

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	PID *	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
65	SAND (SM/SP) orange and gray mottled, damp, moderate cohesion, medium grained sand with some thin, interbedded silty sand layers	61	SS	NA	NA	2.7	NA			
70	water noted by driller at 71 feet	71	SS	NA	NA	4.0	NA			
75	SILTY CLAY (CL) dark gray to blue, wet, contains minor fine grained sand									
80	SAND (SP) medium brown, damp to moist, medium grained sand	81	SS	NA	NA	0	NA			
85										
90										
95										
100										
105										
110	Bottom of boring at 110 feet. Groundwater encountered at 71 feet.									
115	* PID: PHOTO-IONIZATION DETECTOR VALUE (eV)									

## SAMPLER TYPE

SS - DRIVEN SPLIT SPOON  
ST - PRESSED SHELBY TUBE

RC - ROCK CORE  
CT - CONTINUOUS TUBE

## BORING METHOD

HSA - HOLLOW STEM AUGER  
CFA - CONTINUOUS FLIGHT AUGERS

DC - DRIVING CASING  
MD - MUD DRILLING

## SUBSURFACE EXPLORATION

## LITHOLOGIC LOG OF MW-6

Client : H. KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : MW-6  
 Logged By : B. LEEVER  
 Approved By : K. PITCHFORD, C.E.G.  
 Drilled By : IT CORPORATION

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11-15-89 Date Completed : 11-16-89  
 Method : HSA Total Depth : 115 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : 4 INCH Length : 31 FEET  
 Slot Size : 0.020 INCH Type : SCH 40 PVC  
 Casing Dia : 4 INCH Length : 84 FEET

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	PID +	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
	asphaltic concrete upper 3-inches									
5	SILTY SAND (SM) reddish brown, damp, dense, silty very fine to medium grained sand	5	SS	NA	NA	3.7	NA			
10	continued SILTY SAND (SM)	10	SS	NA	NA	2.6	NA			
15		15	SS	.75	NA	3.7	1515			
20	SAND (SW) tan, damp, medium dense, very fine to medium grained sand with trace silt	20	SS	.80	NA	4.1	1521			
25		25	SS	1.0	NA	NA	1527			
30		30	SS	1.0	NA	2.7	1534			
40	continued SAND (SW)	40	SS	1.0	NA	4.6	1542			
50		50	SS	1.0	NA	3.8	1555			
60		60	SS	1.1	NA	NA	NA			

### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## SUBSURFACE EXPLORATION

## LITHOLOGIC LOG OF MW-6

Client : H. KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : MW-6  
 Logged By : C. OSTERBERG  
 Approved By : K. PITCHFORD, C.E.G.  
 Drilled By : IT CORPORATION

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11-15-89 Date Completed : 11-16-89  
 Method : HSA Total Depth : 115 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : 4-INCH Length : 31 FEET  
 Slot Size : 0.02 INCH Type : PVC  
 Casing Dia : 4 INCH Length : 84 FEET

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	PID *	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA								
65	continued SAND (SP/SW) becomes orangish tan								
70	SILTY SAND (SM) orange, damp, silty very fine grained sand	70	SS	NA	NA	NA			
75									
80	continued SILTY SAND (SM)	80	SS	NA	NA	NA			
85									
90	SANDY SILT (ML) medium brown, damp to wet, cohesive, plastic, fine grained sand and silt	90	SS	NA	NA	NA			
95									
100	increased SAND (SM) in bottom of sampler	101	SS	NA	NA	NA			
105	SILTY SAND (SM) medium brown, slightly cohesive, non-plastic, saturated, silty fine to medium grained sand with trace clay	105	SS	NA	NA	NA			
110									
115	Bottom of boring at 115 feet. Groundwater encountered at 85.4 feet								
	* PID: PHOTO-IONIZATION DETECTOR VALUE (eV)								

### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## ENSR CONSULTING & ENGINEERING

### SUBSURFACE EXPLORATION

### LITHOLOGIC LOG OF MW-7

Client : H. KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : MW-7  
 Logged By : B. LEEVER  
 Approved By : K. PITCHFORD, C.E.G.  
 Drilled By : GROUNDWATER TECHNOLOGY, INC.

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11-16-89 Date Completed : 11-16-89  
 Method : HSA Total Depth : 96 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : 4 INCH Length : 30 FEET  
 Slot Size : 0.020 INCH Type : SCH 40 PVC  
 Casing Dia : 4 INCH Length : 65 FEET

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	+ PID	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
5	Asphaltic Concrete upper 2-inches SAND (SP) tan to brown, damp, dense, very fine to medium grained sand with minor silt	5	SS	1.4	20	1.0	0800			
10	continued SAND (SP) becomes reddish tan	10	SS	1.5	26	2.1	0807			
15		15	SS	1.5	24	1.2	0812			
20		20	SS	1.5	49	2.1	0817			
25	continued SAND (SP) becomes tan, no silt	25	SS	1.5	31	2.7	0823			
30		30	SS	1.5	33	2.1	0838			
40		40	SS	1.5	40	17.3	0849			
50		50	SS	1.5	43	6.7	0902			
60	continued SAND (SP) grades downward to a very fine to fine sand	60	SS	1.5	34	3.6	0949			

#### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

#### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## SUBSURFACE EXPLORATION

## LITHOLOGIC LOG OF MW-7

Client : H. KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : MW-7  
 Logged By : B. LEEVER  
 Approved By : K. PITCHFORD, C.E.G.  
 Drilled By : GROUNDWATER TECHNOLOGY, INC.

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11-16-89 Date Completed : 11-21-89  
 Method : HSA Total Depth : 96 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : 4 INCH Length : 30 FEET  
 Slot Size : 0.020 INCH Type : SCH 40 PVC  
 Casing Dia : 4 INCH Length : 65 FEET

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	* PID	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
65	continued SAND (SP) as above									
70	continued SAND (SP) tan to light gray, damp, dense, very fine grained sand with trace silt	70	SS	1.5	50+	3.0	1012			
75										
80	continued SAND (SP) as above	80	SS	1.5	43	3.0	1055			
85										
90	SILTY SAND (SM) tan to brown, damp to saturated, dense, silty very fine grained sand	90	SS	1.5	41	NA	1120			
95	SILT (ML) gray with Fe staining, damp, dense, with trace v.fine sand	95	SS	1.5	NA	NA	1155			
100	Bottom of boring and well completed at 96 feet. Perched water encountered at 88 feet.									
105										
110										
115	* PID: PHOTO-IONIZATION DETECTOR VALUE (eV)									

### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## ENSR CONSULTING &amp; ENGINEERING

## SUBSURFACE EXPLORATION

## LITHOLOGIC LOG OF MW-8

Client : KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : MW-8  
 Logged By : K. PITCHFORD, C.E.G.  
 Approved By :  
 Drilled By : IT CORPORATION

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11/14/89 Date Completed : 11/14/89  
 Method : HSA Total Depth : 115 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : 4 INCH Length : 30 FEET  
 Slot Size : 0.020 INCH Type : PVC  
 Casing Dia : 4 INCH Length : 80 FEET

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	PID *	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
5	asphaltic concrete upper 2-inches SILTY SAND (SM) light to medium brown, damp, dense, silty fine to medium grained sand with minor clay	5	SS	NA	NA	14.6	1100			
10		10	SS	NA	NA	8.7	NA			
15		15	SS	NA	NA	14.4	NA			
20	continued SILTY SAND (SM)	20	SS	NA	NA	8.6	NA			
25		25	SS	NA	NA	15.9	NA			
30		30	SS	NA	NA	23.4	NA			
35		35	SS	NA	NA	25.9	NA			
40		40	SS	NA	NA	16.7	NA			
45	continued SILTY SAND (SM) sand fraction fines downward, with diminishing silt and clay content									
50		50	SS	NA	NA	6.4	NA			
55	SAND (SW) orange to brown, fine grained sand with minor silt and clay									
		60	SS	NA	NA	38	NA			

## SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

## BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## ENSR CONSULTING & ENGINEERING

### SUBSURFACE EXPLORATION

### LITHOLOGIC LOG OF MW-8

Client : KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : MW-8  
 Logged By : K. PITCHFORD, C.E.G.  
 Approved By :  
 Drilled By : IT CORPORATION

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11/14/89 Date Completed : 11/15/89  
 Method : HSA Total Depth : 115 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : 4 INCH Length : 30 FEET  
 Slot Size : 0.020 INCH Type : PVC  
 Casing Dia : 4 INCH Length : 80 FEET

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	PID *	TIME	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
65	continued SAND (SW) orange to brown, becomes damp,									
70		70	SS	NA	NA	43.0	1400			
75										
80	continued SAND (SW) grades to a medium grained sand with silty to clayey stringers	80	SS	NA	NA	NA	NA			
85										
90	continued SAND (SP/SW) becomes saturated	90	SS	NA	NA	NA	NA			
95	CLAY (CL) gray, damp, stiff, plastic, minor fine sand and silt									
	SILTY SAND (SM) light brown, damp to wet, dense, fine to medium grained sand									
100										
105										
110										
115	Bottom of boring at 115 feet. Groundwater encountered at 85.5 feet.									

\* PID: PHOTO-IONIZATION DETECTOR VALUE (eV)

#### SAMPLER TYPE

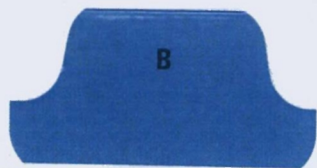
SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

#### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

SECTION 4





## ENSR CONSULTING & ENGINEERING

### SUBSURFACE EXPLORATION

### LITHOLOGIC LOG OF HB-1

Client : H. KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : HB-1  
 Logged By : C. OSTERBERG  
 Approved By : K. PITCHFORD, C.E.G.  
 Drilled By : ENSR

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11-15-89 Date Completed : 11-15-89  
 Method : HAND AUGER Total Depth : 5 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : . Length : .  
 Slot Size : . Type : .  
 Casing Dia : . Length : .

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT			GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA									
1	Asphaltic Concrete upper 2-inches SAND (SP) orange, well sorted, fine to medium grained sand, fines < 10%	1	SS	0.5	NA					
2	continued SAND (SP) becomes reddish brown									
3										
4										
5	continued SAND (SP) dark brown, well sorted, fine to medium grained sand	5	SS	0.5	NA					
6	Bottom of hand boring at 5 feet. No free groundwater encountered. Boring backfilled with concrete to ground surface.									
7										
8										
9										
10										
11										

#### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

#### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## ENSR CONSULTING & ENGINEERING

### SUBSURFACE EXPLORATION

### LITHOLOGIC LOG OF HB-2

Client : H. KRAMER

Project Name : SITE ASSESSMENT

Project Location : EL SEGUNDO, CA

Job Number : 9500-089 Boring No : HB-2

Logged By : C. OSTERBERG

Approved By : K. PITCHFORD, C.E.G.

Drilled By : ENSR

#### DRILLING AND SAMPLING INFORMATION

Date Started : 11-15-89 Date Completed : 11-15-89

Method : HAND AUGER Total Depth : 5 FEET

#### WELL COMPLETION INFORMATION

Screen Dia : . Length : .

Slot Size : . Type : .

Casing Dia : . Length : .

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA							
1	Asphaltic Concrete upper 3-inches SAND (SP) orange, damp, well sorted, fine to medium grained sand with minor silt	1	SS	0.5	NA			
2								
3								
4								
5	continued SAND (SP) becomes brown to orange, damp to saturated	5	SS	0.5	≈			
	Bottom of hand boring at 5 feet. No free groundwater encountered. Boring backfilled with concrete to ground surface.							
6								
7								
8								
9								
10								
11								

#### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON  
ST - PRESSED SHELBY TUBE

RC - ROCK CORE  
CT - CONTINUOUS TUBE

#### BORING METHOD

HSA - HOLLOW STEM AUGER  
CFA - CONTINUOUS FLIGHT AUGERS

DC - DRIVING CASING  
MD - MUD DRILLING

## ENSR CONSULTING & ENGINEERING

### SUBSURFACE EXPLORATION

### LITHOLOGIC LOG OF HB-3

Client : H. KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : HB-3  
 Logged By : C. OSTERBERG  
 Approved By : K. PITCHFORD, C.E.G.  
 Drilled By : ENSR

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11-16-89 Date Completed : 11-16-89  
 Method : HAND AUGER Total Depth : 5 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : . Length : .  
 Slot Size : . Type : .  
 Casing Dia : . Length : .

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA							
1	Asphaltic Concrete upper 2-inches SAND (SP) orange to brown, dry, fine to medium grained sand with minor silt, no odor	1	SS	0.5	NA			
2	continued SAND (SP) becomes damp							
3								
4								
5	continued SAND (SP) as above, no odor	5	SS	0.5	NA			
6	Bottom of hand boring at 5 feet. No free groundwater encountered. Boring backfilled with concrete to ground surface.							
7								
8								
9								
10								
11								

#### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

#### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## ENSR CONSULTING & ENGINEERING

### SUBSURFACE EXPLORATION

### LITHOLOGIC LOG OF HB-4

Client : H. KRAMER  
 Project Name : SITE ASSESSMENT  
 Project Location : EL SEGUNDO, CA  
 Job Number : 9500-089 Boring No : HB-4  
 Logged By : C. OSTERBERG  
 Approved By : K. PITCHFORD, C.E.G.  
 Drilled By : ENSR

DRILLING AND SAMPLING INFORMATION  
 Date Started : 11-17-89 Date Completed : 11-17-89  
 Method : HAND AUGER Total Depth : 5 FEET  
 WELL COMPLETION INFORMATION  
 Screen Dia : . Length : .  
 Slot Size : . Type : .  
 Casing Dia : . Length : .

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA							
1	SILTY SAND (SM) orange to brown, moist, silty fine grained sand with minor clay	1	SS	0.5	NA			
2								
3								
4								
5	continued SILTY SAND (SM) becomes very moist to saturated	5	SS	0.5	NA			
5	Bottom of hand boring at 5 feet. No free groundwater encountered. Boring backfilled with concrete to ground surface.							
6								
7								
8								
9								
10								
11								

#### SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
 ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

#### BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
 CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

## ENSR CONSULTING &amp; ENGINEERING

## SUBSURFACE EXPLORATION

## LITHOLOGIC LOG OF HB-5

Client : H. KRAMER  
Project Name : SITE ASSESSMENT  
Project Location : EL SEGUNDO, CA  
Job Number : 9500-089 Boring No : HB-5  
Logged By : C. OSTERBERG  
Approved By : K. PITCHFORD, C.E.G.  
Drilled By : ENSR

DRILLING AND SAMPLING INFORMATION  
Date Started : 11-17-89 Date Completed : 11-17-89  
Method : HAND AUGER Total Depth : 5 FEET  
WELL COMPLETION INFORMATION  
Screen Dia : . Length : .  
Slot Size : . Type : .  
Casing Dia : . Length : .

DEPTH IN FEET	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	RECOVERY (FEET)	BLOW COUNT	GRAPHIC LOG	WELL COMPLETION	WATER LEVEL
	SURFACE ELEVATION : 90 FEET, U.S.G.S. VENICE, CA							
1	SILTY SAND (SM) dark brown, silty fine to medium grained sand with minor clay	1	SS	0.5	NA			
2	SANDY CLAY (CL) dark brown, moist, fine sandy clay with minor coarse sand and minor silt							
3								
4								
5	continued SANDY CLAY (CL) becomes very moist, plastic, cohesive	5	SS	0.5	NA			
6	Bottom of hand boring at 5 feet. No free groundwater encountered. Boring backfilled with concrete to ground surface.							
7								
8								
9								
10								
11								

## SAMPLER TYPE

SS - DRIVEN SPLIT SPOON RC - ROCK CORE  
ST - PRESSED SHELBY TUBE CT - CONTINUOUS TUBE

## BORING METHOD

HSA - HOLLOW STEM AUGER DC - DRIVING CASING  
CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

**SECTION 1**

**Enseco - CRL / South Coast**

7440 Lincoln Way • Garden Grove, CA 92641  
(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL  
FAX: (714) 891-5917

December 14, 1989

ENSR CONSTRUCTORS  
19782 MACARTHUR BLVD., STE. 365  
IRVINE, CA 92715-2417  
ATTN: MR. ERIK NELSON

Analysis No.: G-8931716-001/003  
Date Sampled: 13-NOV-1989  
Date Sample Rec'd: 13-NOV-1989  
Project: (C89-111-002) KRAMER - EL SEGUNDO

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8931716-001/003 shown above.

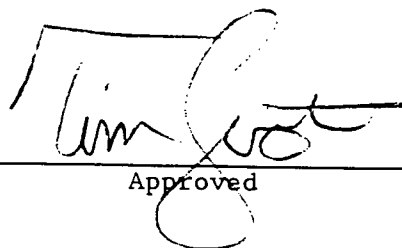
The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

Solid samples are reported on "as received" basis.

Preliminary data were provided on December 12, 1989 at 2:40 P.M.

  
Reviewed

  
Approved

The Report Cover Letter is an integral part of this report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.



**Enseco - CRL / South Coast**

7440 Lincoln Way • Garden Grove, CA 92641  
 (714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL  
 FAX: (714) 891-5917

**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8931716-001  
 Date Sampled: 13-NOV-1989  
 Date Sample Rec'd: 13-NOV-1989  
 Date Analyzed: 29-NOV-1989  
 1-DEC-1989  
 16-NOV-1989  
 27-NOV-1989  
 4-DEC-1989  
 7-DEC-1989

Sample Type: SOLID

Project: (C89-111-002) KRAMER - EL SEGUNDO  
 Sample ID: SB-1A-5

Parameter	Units	Result	Blank	Detection Limit
Antimony, STLC (EPA 200.7)	mg/L	4.4	ND	1.0
Arsenic, STLC (EPA 206.3)	mg/L	0.53	ND	0.05
Barium, STLC (EPA 200.7)	mg/L	8.	ND	0.2
Beryllium, STLC (EPA 200.7)	mg/L	6.1	ND	0.2
Cadmium, STLC (EPA 200.7)	mg/L	0.4	ND	0.2
Chromium, STLC (EPA 200.7)	mg/L	1.0	ND	0.2
Chromium, Hexavalent, STLC (EPA 7196)	mg/L	ND	ND	0.05
Cobalt, STLC (EPA 200.7)	mg/L	0.8	ND	0.2
Copper, STLC (EPA 200.7)	mg/L	68	ND	0.5
Lead, STLC (EPA 200.7)	mg/L	130	ND	0.5
Mercury, STLC (EPA 245.1)	mg/L	ND	ND	0.005
Molybdenum, STLC (EPA 200.7)	mg/L	1.1	ND	0.2
Nickel, STLC (EPA 200.7)	mg/L	4.3	ND	0.2
Selenium, STLC (EPA 270.3)	mg/L	0.03	ND	0.01
Silver, STLC (EPA 200.7)	mg/L	ND	ND	0.2
Thallium, STLC (EPA 279.1)	mg/L	ND	ND	0.3
Vanadium, STLC (EPA 200.7)	mg/L	0.6	ND	0.2
Zinc, STLC (EPA 200.7)	mg/L	3,400.	ND	5

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**Laboratory Report****-----**  
**ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8931716-001/001

Date Sampled: 13-NOV-1989

Date Sample Rec'd: 13-NOV-1989

Date Analyzed: 7-DEC-1989

30-NOV-1989

Sample Type: SOLID

Project: (C89-111-002) KRAMER - EL SEGUNDO  
**-----**

Sample ID	Aluminum/ STLC mg/L EPA 200.7	Iron/STLC mg/L EPA 200.7	Manganese/ STLC mg/L EPA 200.7
SB-1A-5	530.	1,400.	140.
Blank	ND(0.12)	ND(0.07)	ND(0.02)

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**Laboratory Report**
**ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8931716-001  
 Date Sampled: 13-NOV-1989  
 Date Sample Rec'd: 13-NOV-1989  
 Date Analyzed: 27-NOV-1989  
 17-NOV-1989  
 16-NOV-1989  
 4-DEC-1989  
 30-NOV-1989

Sample Type: SOLID

Project: (C89-111-002) KRAMER - EL SEGUNDO  
 Sample ID: SB-1A-5

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	100.0
Arsenic/TTLC (EPA 7061)	mg/kg	16.	ND	1.0
Barium/TTLC (EPA 6010)	mg/kg	310.	ND	5.0
Beryllium/TTLC (EPA 6010)	mg/kg	230.	ND	5.0
Cadmium/TTLC (EPA 6010)	mg/kg	6.	ND	5.0
Chromium, Total/TTLC (EPA 6010)	mg/kg	37.	ND	5.0
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	28.	ND	5.0
Copper/TTLC (EPA 6010)	mg/kg	12,000.	ND	100.0
Lead/TTLC (EPA 6010)	mg/kg	2,500.	ND	20.0
Mercury/TTLC (EPA 7471)	mg/kg	0.18	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	33.	ND	5.0
Nickel/TTLC (EPA 6010)	mg/kg	310.	ND	5.0
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	5.0
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	27.	ND	5.0
Zinc/TTLC (EPA 6010)	mg/kg	65,000.	ND	100

NOTE: Higher detection limits due to sample matrix.

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**Laboratory Report****ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365

Irvine, CA 92715

ATTN: Mr. Erik Nelson

Analysis No.: G-8931716-001/003

Date Sampled: 13-NOV-1989

Date Sample Rec'd: 13-NOV-1989

Date Analyzed: 30-NOV-1989

27-NOV-1989

Sample Type: SOLID

Project: (C89-111-002) KRAMER - EL SEGUNDO

Sample ID	Aluminum/ TTLC	Iron/TTLC	Manganese/ TTLC
	mg/kg	mg/kg	mg/kg
	EPA 6010	EPA 6010	EPA 6010
SB-1A-5	18,000.	31,000.	4,100.
SB-1B-30	2,000.	4,900.	52.
SB-1B-15	7,400.	9,700.	380.
Blank	ND(0.300)	ND(1.000)	ND(0.050)

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8931716-003  
 Date Sampled: 13-NOV-1989  
 Date Sample Rec'd: 13-NOV-1989  
 Date Analyzed: 30-NOV-1989  
 17-NOV-1989  
 16-NOV-1989  
 27-NOV-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (C89-111-002) KRAMER - EL SEGUNDO  
 Sample ID: SB-1B-15

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1.0
Arsenic/TTLC (EPA 7061)	mg/kg	2,100.	ND	200.0
Barium/TTLC (EPA 6010)	mg/kg	45.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.3	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	5.5	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	4.7	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	15.	ND	0.2
Lead/TTLC (EPA 6010)	mg/kg	2.6	ND	0.2
Mercury/TTLC (EPA 7471)	mg/kg	0.15	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.07	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	5.3	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.
Vanadium/TTLC (EPA 6010)	mg/kg	13.	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	24.	ND	0.05

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**Laboratory Report**
**ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8931716-002  
 Date Sampled: 13-NOV-1989  
 Date Sample Rec'd: 13-NOV-1989  
 Date Analyzed: 27-NOV-1989  
 17-NOV-1989  
 16-NOV-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (C89-111-002) KRAMER - EL SEGUNDO  
 Sample ID: SB-1B-30

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1.0
Arsenic/TTLC (EPA 7061)	mg/kg	2.5	ND	0.2
Barium/TTLC (EPA 6010)	mg/kg	15.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.13	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	0.16	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	5.	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	1.5	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	6.1	ND	0.2
Lead/TTLC (EPA 6010)	mg/kg	1.1	ND	0.2
Mercury/TTLC (EPA 7471)	mg/kg	0.08	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.18	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	4.9	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	0.5	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.
Vanadium/TTLC (EPA 6010)	mg/kg	8.8	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	13.	ND	0.05

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**Laboratory Report**
**ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365

Irvine, CA 92715

ATTN: Mr. Erik Nelson

Project: (C89-111-002) KRAMER - EL SEGUNDO

Analysis No.: G-8931716-001/003

Date Sampled: 13-NOV-1989

Date Sample Rec'd: 13-NOV-1989

Sample Type: SOLID

**QA/QC Summary**

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
7-DEC-1989	ALUMINUM (EPA 200.7)	L	97	60-130	4.	30
7-DEC-1989	IRON (EPA 200.7)	L	99	60-130	1.	40
30-NOV-1989	MANGANESE (EPA 200.7)	L	104	60-130	1.	40
30-NOV-1989	ANTIMONY (EPA 200.7)	L	100	68-137	3.	30
30-NOV-1989	BARIUM (EPA 200.7)	L	104	63-137	0.	30
30-NOV-1989	BERYLLIUM (EPA 200.7)	L	103	66-130	1.	30
30-NOV-1989	CADMIUM (EPA 200.7)	L	102	72-141	3.	25
30-NOV-1989	CHROMIUM (EPA 200.7)	L	104	69-148	0.	30
30-NOV-1989	COBALT (EPA 200.7)	L	102	73-132	1.	30
30-NOV-1989	COPPER (EPA 200.7)	L	102	68-129	1.	25
30-NOV-1989	LEAD (EPA 200.7)	L	104	65-144	1.	25
30-NOV-1989	MOLYBDENUM (EPA 200.7)	L	105	69-144	1.	25
30-NOV-1989	NICKEL (EPA 200.7)	L	104	65-146	1.	25
30-NOV-1989	SILVER (EPA 200.7)	L	106	25-147	2.	52
30-NOV-1989	VANADIUM (EPA 200.7)	L	107	73-130	1.	25
7-DEC-1989	ZINC (EPA 200.7)	L	98	73-138	3.	25
17-NOV-1989	ARSENIC (EPA 206.3)	L	100	78-118	5.	25
27-NOV-1989	MERCURY (EPA 245.1)	L	100	41-137	0.	37
4-DEC-1989	SELENIUM (EPA 270.3)	L	108	41-137	0.	25
7-DEC-1989	THALLIUM (EPA 279.1)	L	90	75-109	0.	25
30-NOV-1989	ALUMINUM (EPA 6010)	L	91	60-130	4.	30
30-NOV-1989	IRON (EPA 6010)	L	90	60-130	1.	30
27-NOV-1989	MANGANESE (EPA 6010)	L	83	60-130	6.	30
27-NOV-1989	ANTIMONY (EPA 6010)	L	78	15-169	6.	95
27-NOV-1989	BARIUM (EPA 6010)	L	82	15-155	5.	95
27-NOV-1989	BERYLLIUM (EPA 6010)	L	86	18-110	4.	35
27-NOV-1989	CADMIUM (EPA 6010)	L	86	18-126	3.	95
27-NOV-1989	CHROMIUM (EPA 6010)	L	89	15-210	3.	95
27-NOV-1989	COBALT (EPA 6010)	L	86	15-132	3.	45
27-NOV-1989	COPPER (EPA 6010)	L	84	15-161	5.	77
27-NOV-1989	LEAD (EPA 6010)	L	86	22-166	4.	95
27-NOV-1989	MOLYBDENUM (EPA 6010)	L	92	15-130	5.	92
27-NOV-1989	NICKEL (EPA 6010)	L	88	16-142	7.	95
27-NOV-1989	SILVER (EPA 6010)	L	81	24-108	3.	95
27-NOV-1989	VANADIUM (EPA 6010)	L	87	25-139	2.	58
30-NOV-1989	ZINC (EPA 6010)	L	77	15-164	3.	95
27-NOV-1989	ZINC (EPA 6010)	L	84	15-164	1.	95

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**Laboratory Report****ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715

ATTN: Mr. Erik Nelson

Project: (C89-111-002) KRAMER - EL SEGUNDO

Analysis No.: G-8931716-001/003

Date Sampled: 13-NOV-1989

Date Sample Rec'd: 13-NOV-1989

Sample Type: SOLID

**QA/QC Summary**

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
17-NOV-1989	ARSENIC (EPA 7061)	L	82	50-127	17.	25
16-NOV-1989	CHROMIUM, HEX/TTLC (EPA 7196)	L	97	60-130	10.	40
16-NOV-1989	CHROMIUM, HEXAVALENT (EPA 7196)	L	97	60-130	10.	40
27-NOV-1989	MERCURY (EPA 7471)	L	101	25-125	3.	51
17-NOV-1989	SELENIUM (EPA 7741)	L	66	30-103	1.	30
4-DEC-1989	THALLIUM (EPA 7840)	L	61	42-127	15.	39

M = Matrix Spike

L = Laboratory Control Sample Spike

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# CHAIN OF CUSTODY RECORD

931716

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO</b>			ANALYSES CAM METALS (WED) + AL, Fe, Mn EPA 8240 CAM METALS (TUE) + AL, Fe, Mn			
Project No. <b>C89-111-002</b>			Field Logbook No.						
Sampler: (Signature) <b>Ken Pitchford</b>			Chain of Custody Tape No.						
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	HOLD	HOLD		REMARKS	
<del>SB</del> B-1A-1	11/13/89	1500		SOIL - GRAB	HOLD	HOLD		WILL CALL FOR 8240 DETERMINATION	
SB-1A-5	"	"		"	X	"	X		
SB-1A-10	"	"		"	X	"	HOLD		
SB-1B-15	"	"		SOIL - DRILL HOLE	X	"	X		
SB-1B-20	"	"		"	HOLD	"			
SB-1B-25	"	"		"	"	"			
SB-1B-30	"	"		"	"	"	X		
SB-1B-40	"	"		"	"	"		*Instructions for metal analyses relayed by C. Keller 11/14, 4:45pm. No 8240's to be done on this set. 92	
*TO BE IDENTIFIED AS SB1A & SB1B, per C. Keller, 12/4/89, 3:45pm 92									
Relinquished by: (Signature) <b>[Signature]</b>				Date 11/13/89	Time 1505	Received by: (Signature) <b>[Signature]</b>		Date 11/13/89	Time 3:10 PM
Relinquished by: (Signature) <b>[Signature]</b>				Date 11/13/89	Time 5:05 PM	Received by: (Signature) <b>[Signature]</b>		Date	Time
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <b>[Signature]</b>		Date 11/13/89	Time 5:05 PM
Sample Disposal Method: <b>LAB</b>				Disposed of by: (Signature) <b>[Signature]</b>				Date	Time
SAMPLE COLLECTOR				ANALYTICAL LABORATORY					

## SECTION 2

**Enseco - CRL / South Coast**

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FAX: (714) 891-5917

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DEC 11 1989

Ans d .....

December 7, 1989

ENSR CONSTRUCTORS  
19782 MacARTHUR BLVD., SUITE 365  
IRVINE, CA 92715  
ATTN: MR. ERIK NELSON

Analysis No.: G-8931921-001/006  
Date Sampled: 14-NOV-1989  
Date Sample Rec'd: 14-NOV-1989  
Project: (9500-089) KRAMER-EL SEGUNDO

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8931921-001/006 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached. Sample seals were intact.

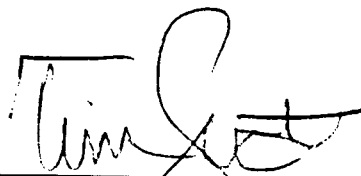
Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

Solid samples are reported on "as received" basis.

Preliminary data were provided on December 6, 1989 at 10:00 A.M.

Reference #: 33Site Name: H. KRAMEREPA ID#: CAD 008260267

Reviewed



Approved

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FAX: (714) 891-5917

**Laboratory Report**

-----  
ENSR CONSTRUCTORS  
19782 MacARTHUR BLVD., SUITE 365  
IRVINE, CA 92715  
ATTN: MR. ERIK NELSON

Analysis No.: G-8931921-001/006  
Date Sampled: 14-NOV-1989  
Date Sample Rec'd: 14-NOV-1989  
Date Analyzed: 30-NOV-1989  
Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
-----

Sample ID	Aluminum mg/kg EPA 6010	Iron mg/kg EPA 6010	Manganese mg/kg EPA 6010
MW-8-5	2,700.	8,400.	110.
MW-8-20	1,100.	2,600.	31.
B3-5	3,400.	9,300.	139.
B3-20	2,200.	4,000.	55.
B4-5	3,200.	7,800.	150.
B4-20	3,100.	5,200.	130.
Blank	ND(0.3)	ND(1.0)	ND(0.05)

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacARTHUR BLVD., SUITE 365  
 IRVINE, CA 92715  
 ATTN: MR. ERIK NELSON

Analysis No.: G-8931921-001  
 Date Sampled: 14-NOV-1989  
 Date Sample Rec'd: 14-NOV-1989  
 Date Analyzed: 30-NOV-1989  
 18-NOV-1989  
 16-NOV-1989  
 27-NOV-1989  
 22-NOV-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: MW-8-5

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1.0
Arsenic/TTLC (EPA 7061)	mg/kg	1.9	ND	0.20
Barium/TTLC (EPA 6010)	mg/kg	19.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.10	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	0.07	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	6.1	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	2.	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	3.6	ND	0.2
Lead/TTLC (EPA 6010)	mg/kg	1.1	ND	0.2
Mercury/TTLC (EPA 7471)	mg/kg	ND	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	3.2	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	11.	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	8.5	ND	0.05

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**Enseco - CRL / South Coast**

7440 Lincoln Way • Garden Grove, CA 92641  
 (714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL  
 FAX: (714) 891-5917

**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacARTHUR BLVD., SUITE 365  
 IRVINE, CA 92715  
 ATTN: MR. ERIK NELSON

Analysis No.: G-8931921-002  
 Date Sampled: 14-NOV-1989  
 Date Sample Rec'd: 14-NOV-1989  
 Date Analyzed: 30-NOV-1989  
 18-NOV-1989  
 16-NOV-1989  
 27-NOV-1989  
 22-NOV-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: MW-8-20

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1.0
Arsenic/TTLC (EPA 7061)	mg/kg	1.3	ND	0.10
Barium/TTLC (EPA 6010)	mg/kg	9.8	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.06	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	4.7	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	0.87	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	7.5	ND	0.2
Lead/TTLC (EPA 6010)	mg/kg	1.8	ND	0.2
Mercury/TTLC (EPA 7471)	mg/kg	ND	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	2.9	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	4.3	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	21.	ND	0.05

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 FAX: (714) 891-5917

**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacARTHUR BLVD., SUITE 365  
 IRVINE, CA 92715  
 ATTN: MR. ERIK NELSON

Analysis No.: G-8931921-003  
 Date Sampled: 14-NOV-1989  
 Date Sample Rec'd: 14-NOV-1989  
 Date Analyzed: 30-NOV-1989  
 18-NOV-1989  
 16-NOV-1989  
 27-NOV-1989  
 22-NOV-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: B3-5

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1.0
Arsenic/TTLC (EPA 7061)	mg/kg	0.96	ND	0.10
Barium/TTLC (EPA 6010)	mg/kg	28.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.14	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	0.08	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	6.1	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	2.2	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	17.	ND	0.2
Lead/TTLC (EPA 6010)	mg/kg	1.4	ND	0.2
Mercury/TTLC (EPA 7471)	mg/kg	ND	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.11	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	4.	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	12.	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	19.	ND	0.05

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 FAX: (714) 891-5917

**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacARTHUR BLVD., SUITE 365  
 IRVINE, CA 92715  
 ATTN: MR. ERIK NELSON

Analysis No.: G-8931921-004  
 Date Sampled: 14-NOV-1989  
 Date Sample Rec'd: 14-NOV-1989  
 Date Analyzed: 30-NOV-1989  
 18-NOV-1989  
 16-NOV-1989  
 27-NOV-1989  
 22-NOV-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: B3-20

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1.0
Arsenic/TTLC (EPA 7061)	mg/kg	0.89	ND	0.10
Barium/TTLC (EPA 6010)	mg/kg	14.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.07	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	0.06	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	6.5	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	1.3	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	13.	ND	0.2
Lead/TTLC (EPA 6010)	mg/kg	0.86	ND	0.2
Mercury/TTLC (EPA 7471)	mg/kg	ND	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.05	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	3.9	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	6.8	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	9.8	ND	0.05

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacARTHUR BLVD., SUITE 365  
 IRVINE, CA 92715  
 ATTN: MR. ERIK NELSON

Analysis No.: G-8931921-005  
 Date Sampled: 14-NOV-1989  
 Date Sample Rec'd: 14-NOV-1989  
 Date Analyzed: 30-NOV-1989  
 18-NOV-1989  
 16-NOV-1989  
 27-NOV-1989  
 22-NOV-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: B4-5

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1.0
Arsenic/TTLC (EPA 7061)	mg/kg	0.92	ND	0.10
Barium/TTLC (EPA 6010)	mg/kg	27.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.13	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	0.08	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	5.8	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	2.3	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	3.3	ND	0.2
Lead/TTLC (EPA 6010)	mg/kg	1.4	ND	0.2
Mercury/TTLC (EPA 7471)	mg/kg	ND	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.08	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	3.8	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	11.	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	10.	ND	0.05

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacARTHUR BLVD., SUITE 365  
 IRVINE, CA 92715  
 ATTN: MR. ERIK NELSON

Analysis No.: G-8931921-006  
 Date Sampled: 14-NOV-1989  
 Date Sample Rec'd: 14-NOV-1989  
 Date Analyzed: 30-NOV-1989  
 18-NOV-1989  
 16-NOV-1989  
 27-NOV-1989  
 22-NOV-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: B4-20

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1.0
Arsenic/TTLC (EPA 7061)	mg/kg	1.1	ND	0.10
Barium/TTLC (EPA 6010)	mg/kg	21.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.11	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	0.07	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	5.4	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	1.8	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	6.7	ND	0.2
Lead/TTLC (EPA 6010)	mg/kg	1.4	ND	0.2
Mercury/TTLC (EPA 7471)	mg/kg	0.02	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.1	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	3.6	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	8.5	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	14.	ND	0.05

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 FAX: (714) 891-5917

**Laboratory Report**
**ENSR CONSTRUCTORS**

19782 MacARTHUR BLVD., SUITE 365  
 IRVINE, CA 92715

ATTN: MR. ERIK NELSON

Project: (9500-089) KRAMER - EL SEGUNDO

Analysis No.: G-8931921-001/006

Date Sampled: 14-NOV-1989

Date Sample Rec'd: 14-NOV-1989

Sample Type: SOLID

**QA/QC Summary**

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
30-NOV-1989	ALUMINUM (EPA 6010)	L	91	60-130	4.	30
30-NOV-1989	IRON (EPA 6010)	L	90	60-130	1.	30
30-NOV-1989	MANGANESE (EPA 6010)	L	87	60-130	2.	30
30-NOV-1989	ANTIMONY (EPA 6010)	L	68	15-169	1.	95
30-NOV-1989	BARIUM (EPA 6010)	L	74	15-155	2.	95
30-NOV-1989	BERYLLIUM (EPA 6010)	L	78	18-110	2.	35
30-NOV-1989	CADMIUM (EPA 6010)	L	74	18-126	0.	95
30-NOV-1989	CHROMIUM (EPA 6010)	L	82	15-210	1.	95
30-NOV-1989	COBALT (EPA 6010)	L	80	15-132	1.	45
30-NOV-1989	COPPER (EPA 6010)	L	78	15-161	1.	77
30-NOV-1989	LEAD (EPA 6010)	L	78	22-166	2.	95
30-NOV-1989	MOLYBDENUM (EPA 6010)	L	80	15-130	2.	92
30-NOV-1989	NICKEL (EPA 6010)	L	83	16-142	1.	95
30-NOV-1989	SILVER (EPA 6010)	L	76	24-108	0.	95
30-NOV-1989	VANADIUM (EPA 6010)	L	83	25-139	0.	58
30-NOV-1989	ZINC (EPA 6010)	L	77	15-164	3.	95
18-NOV-1989	ARSENIC (EPA 7061)	L	74	47-190	2.	30
16-NOV-1989	CHROMIUM, HEX/TTL (EPA 7196)	L	97	60-130	10.	40
27-NOV-1989	MERCURY (EPA 7471)	L	101	25-125	3.	51
18-NOV-1989	SELENIUM (EPA 7741)	L	68	30-103	2.	30
22-NOV-1989	THALLIUM (EPA 7840)	L	57	42-127	11.	39

M = Matrix Spike

L = Laboratory Control Sample Spike

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P.R. # E1027891. JRD

## CHAIN OF CUSTODY RECORD

931921-001/035

Client/Project Name <b>H. KRAMER</b>				Project Location <b>EL SEGUNDO, CA</b>				ANALYSES  <i>17 CANAL METALS</i> <i>AL, Fe, Mg</i> <i>8240</i>  <i>HOLD</i>				
Project No. <b>9500-089</b>				Field Logbook No.								
Sampler: (Signature) <i>Bru Kram</i>				Chain of Custody Tape No.								
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample							REMARKS	
B3-5'	11-14-89			Soil	X	X						
10'	}			}								
15												
20												
25												
30												
35												
40												
Relinquished by: (Signature) <i>Bru Kram</i>				Date 11-14-89	Time	Received by: (Signature) <i>Phil Alcala</i>				Date 11/14/89	Time 4:31 P.M.	
Relinquished by: (Signature) <i>Phil Alcala</i>				Date 11/14/89	Time 5:12 P.M.	Received by: (Signature)				Date	Time	
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <i>Nilo J. Cornejo</i>				Date 11/14/89	Time 5:12 p.m.	
Sample Disposal Method:				Disposed of by: (Signature)				Date	Time			
SAMPLE COLLECTOR  ENSR Corporation 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321				ANALYTICAL LABORATORY  CRL				ENSR  1 of 3				

ONE HR. WAITING TIME / 2 HRS. T.T

31921-001/035  
CHAIN OF CUSTODY RECORD

Client/Project Name <b>H. KRAMER</b>				Project Location <b>EL SEGUNDO, CA</b>				ANALYSES <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">17 CANV METALS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">AL, Fe, Mg</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">B240</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">HOLD</div> </div>			
Project No. <b>9500-089</b>				Field Logbook No.							
Sampler: (Signature) <i>Bir Kram</i>				Chain of Custody Tape No.							

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	ANALYSES	REMARKS
B3 - 45'	11-14-89			Soil		
50'	}					
<del>B3-20A</del>						
B4- 5'					X	X
10'						X
15'						X
20'					X	X
25'						X

Relinquished by: (Signature) <i>Bir Kram</i>		Date 11-14-89	Time	Received by: (Signature) <i>Paul Alcantara</i>		Date 11/14/89	Time 3:30 PM
Relinquished by: (Signature) <i>Paul Alcantara</i>		Date 11/14/89	Time 5:13 PM	Received by: (Signature)		Date	Time
Relinquished by: (Signature)		Date	Time	Received for Laboratory: (Signature) <i>Milo Cornejo</i>		Date 11/14/89	Time 5:13 PM
Sample Disposal Method:		Disposed of by: (Signature)				Date	Time

SAMPLE COLLECTOR  ENSR Corporation 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321	ANALYTICAL LABORATORY  <div style="font-size: 2em; font-family: cursive;">CRL</div>
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ENSR

2 of 3

731921-001/035  
CHAIN OF CUSTODY RECORD

Client/Project Name <b>H. KRAMER</b>			Project Location <b>EL SEGUNDO, CA</b>			ANALYSES <div style="display: flex; justify-content: space-around; font-size: 1.2em;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">17 CAN METALS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Al, Fe, Mg</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8240</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">HOLD</div> </div>						
Project No. <b>9500-089</b>			Field Logbook No.									
Sampler: (Signature) <i>Bin Kwan</i>			Chain of Custody Tape No.									
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample							REMARKS	
B4-30'	11-14-89			SOIL							X	
-35'	}			}							X	
-40'									X			
45'								X				
50'								X				
B4-20A					X	X						
SB2-19'											X	
Relinquished by: (Signature) <i>Bin Kwan</i>				Date 11-14-89	Time	Received by: (Signature) <i>Paul A. Cautela</i>				Date 11/14/89	Time 8:20 PM	
Relinquished by: (Signature) <i>Paul A. Cautela</i>				Date 11/14/89	Time 5:12 PM	Received by: (Signature)				Date	Time	
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <i>Nils J. Cornejo</i>				Date 11/14/89	Time 5:12 PM	
Sample Disposal Method:				Disposed of by: (Signature)				Date				Time
SAMPLE COLLECTOR  ENSR Corporation 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321				ANALYTICAL LABORATORY  CRL B4-50' sample not received, SB2-19' received as extra sample. Notified Erik Nelson 11-15-89 5:55pm -NC						ENSR		
										3 of 3		

P/Q # E1027891 TRP 931921-001/035  
CHAIN OF CUSTODY RECORD

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO</b>			ANALYSES <div style="transform: rotate(-45deg); position: absolute; top: 10px; left: 10px; font-weight: bold;">           TTEC CAN METALS + 3 (Fe, Mn, Al) EPA 8240         </div>					
Project No. <b>9500-089</b>			Field Logbook No.								
Sampler: (Signature) <i>Ken Pitchford</i>			Chain of Custody Tape No. <b>N/A.</b>								
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	REMARKS						
MW-8-5					X	HOLD					
MW-8-10						HOLD	"				
MW-8-15						"	"				
MW-8-20					X	HOLD	"				
MW-8-25						HOLD	"				
MW-8-30						"	"				
MW-8-35						"	"				
MW-8-40						"	"				
Relinquished by: (Signature) <i>Ken Pitchford</i> (15)				Date <b>11/14/89</b>	Time <b>3:30 PM</b>	Received by: (Signature) <i>Fuller</i>				Date <b>11/14/89</b>	Time <b>3:30 PM</b>
Relinquished by: (Signature) <i>Fuller</i>				Date <b>11/14/89</b>	Time <b>5:12 PM</b>	Received by: (Signature)				Date	Time
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <i>Mrs. J. Cornejo</i>				Date <b>11/14/89</b>	Time <b>5:12 PM</b>
Sample Disposal Method:				Disposed of by: (Signature)				Date			
SAMPLE COLLECTOR  ENSR Corporation 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321				ANALYTICAL LABORATORY						ENSR	
										P 1/2	

93192001/035  
CHAIN OF CUSTODY RECORD

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO</b>			<div style="transform: rotate(-45deg); transform-origin: center;"> <b>TITLE: GAL. METALS + 3 (F&amp;M, A)</b>  <b>EPA 8240</b> </div>											
Project No. <b>9500-089</b>			Field Logbook No.									ANALYSES					
Sampler: (Signature) <i>Ken Ritchford</i>			Chain of Custody Tape No.														

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample							REMARKS
MW-8-450					HOLD	HOLD					
MW-8-60					"	"					
MW-8-70					"	X					
MW-8-80					X	HOLD					
MW-8-80A					X	"					

Relinquished by: (Signature) <i>Ken Ritchford</i>		Date <b>11/14/89</b>	Time	Received by: (Signature) <i>Paul C. ...</i>		Date <b>11/14/89</b>	Time <b>3:30 PM</b>
Relinquished by: (Signature) <i>Paul C. ...</i>		Date <b>11/14/89</b>	Time <b>5:11 PM</b>	Received by: (Signature)		Date	Time
Relinquished by: (Signature)		Date	Time	Received for Laboratory: (Signature) <i>Nils J. Cornejo</i>		Date <b>11/14/89</b>	Time <b>5:11 pm</b>
Sample Disposal Method:		Disposed of by: (Signature)				Date	Time

<b>SAMPLE COLLECTOR</b>  <b>ENSR Corporation</b> <b>19782 MacArthur Blvd., STE 365</b> <b>Irvine, CA 92715</b> <b>(714) 476-0321</b>	<b>ANALYTICAL LABORATORY</b>  <div style="text-align: center; font-weight: bold; font-size: 1.5em;">ENSR</div>
P. 2/2	



**SECTION 3**

**Enseco - CRL / South Coast**

7440 Lincoln Way • Garden Grove, CA 92641  
(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL  
FAX: (714) 891-5917

December 14, 1989

ENSR CONSTRUCTORS  
19782 MACARTHUR BLVD., SUITE 365  
IRVINE, CA 92715  
ATTN: MR. ERIK NELSON

Analysis No.: G-8931923-001/012  
Date Sampled: 15-NOV-1989  
Date Sample Rec'd: 15-NOV-1989  
Project: (9500-089) KRAMER-EL SEGUNDO

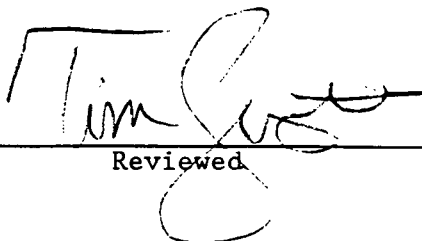
Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8931923-001/012 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached. Sample seals were intact.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

Solid samples are reported on "as received" basis.

Preliminary data were provided on December 13, 1989 at 10:30 A.M.

  
\_\_\_\_\_  
Reviewed

  
\_\_\_\_\_  
Approved

The Report Cover Letter is an integral part of this report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

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FAX: (714) 891-5917

**Laboratory Report****ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365

Irvine, CA 92715

ATTN: Mr. Erik Nelson

Analysis No.: G-8931923-001/012

Date Sampled: 15-NOV-1989

Date Sample Rec'd: 15-NOV-1989

Date Analyzed: 30-NOV-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO

Sample ID	Aluminum/ TTL	Iron/TTL
	mg/kg EPA 6010	mg/kg EPA 6010
B-5-5'	3,400.	7,500.
B-5-20'	5,000.	8,100.
B-5-20A'	5,200.	8,400.
B-6-5'	3,000.	5,900.
B-6-20'	1,200.	2,500.
B-6-20A'	2,700.	3,800.
HB-1-1'	1,800.	4,600.
HB-1-5'	2,200.	4,300.
HB-2-1'	2,600.	12,000.
HB-2-5'	1,900.	4,100.
SB-2-5'	9,600.	19,000.
SB-2-16'	4,400.	19,000.
Blank	ND(0.3)	ND(1.00)

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FAX: (714) 891-5917

## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8931923-001/012  
Date Sampled: 15-NOV-1989  
Date Sample Rec'd: 15-NOV-1989  
Date Analyzed: 4-DEC-1989  
30-NOV-1989  
7-DEC-1989  
6-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO

Sample ID	Aluminum/ STLC mg/L EPA 200.7	Iron/STLC mg/L EPA 200.7	Manganese/ STLC mg/L EPA 200.7	Manganese/ TTLC mg/kg EPA 243.1
B-5-5'				150.
B-5-20'				170.
B-5-20A'				180.
B-6-5'				150.
B-6-20'				24.
B-6-20A'				60.
HB-1-1'				500.
HB-1-5'				110.
HB-2-1'				180.
HB-2-5'				87.
SB-2-5'	810.	1100.	93.	1,200.
SB-2-16'				400.
Blank	ND(0.12)	ND(0.5)	ND(0.02)	ND(0.3)

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## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8931923-001  
Date Sampled: 15-NOV-1989  
Date Sample Rec'd: 15-NOV-1989  
Date Analyzed: 30-NOV-1989  
18-NOV-1989  
16-NOV-1989  
27-NOV-1989  
22-NOV-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: B-5-5'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1
Arsenic/TTLC (EPA 7061)	mg/kg	0.69	ND	0.10
Barium/TTLC (EPA 6010)	mg/kg	46.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.14	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	0.06	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	6.1	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	2.5	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	4.4	ND	0.2
Lead/TTLC (EPA 6010)	mg/kg	1.4	ND	0.2
Mercury/TTLC (EPA 7471)	mg/kg	ND	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.17	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	5.5	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	10.	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	11.	ND	0.05

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FAX: (714) 891-5917

## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8931923-002  
Date Sampled: 15-NOV-1989  
Date Sample Rec'd: 15-NOV-1989  
Date Analyzed: 30-NOV-1989  
18-NOV-1989  
16-NOV-1989  
27-NOV-1989  
22-NOV-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: B-5-20'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1
Arsenic/TTLC (EPA 7061)	mg/kg	1.2	ND	0.10
Barium/TTLC (EPA 6010)	mg/kg	30.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.19	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	0.07	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	9.3	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	3.5	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	4.4	ND	0.2
Lead/TTLC (EPA 6010)	mg/kg	1.5	ND	0.2
Mercury/TTLC (EPA 7471)	mg/kg	ND	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.16	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	5.9	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	13.	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	12.	ND	0.05

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**Laboratory Report**

-----  
 ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8931923-003  
 Date Sampled: 15-NOV-1989  
 Date Sample Rec'd: 15-NOV-1989  
 Date Analyzed: 30-NOV-1989  
 18-NOV-1989  
 16-NOV-1989  
 27-NOV-1989  
 22-NOV-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: B-5-20A'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1
Arsenic/TTLC (EPA 7061)	mg/kg	1.4	ND	0.10
Barium/TTLC (EPA 6010)	mg/kg	33.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.21	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	0.08	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	10.	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	3.5	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	4.4	ND	0.2
Lead/TTLC (EPA 6010)	mg/kg	1.6	ND	0.2
Mercury/TTLC (EPA 7471)	mg/kg	ND	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.14	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	5.9	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	14.	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	12.	ND	0.05

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8931923-004  
 Date Sampled: 15-NOV-1989  
 Date Sample Rec'd: 15-NOV-1989  
 Date Analyzed: 30-NOV-1989  
 18-NOV-1989  
 16-NOV-1989  
 27-NOV-1989  
 22-NOV-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: B-6-5'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1
Arsenic/TTLC (EPA 7061)	mg/kg	270.	ND	20
Barium/TTLC (EPA 6010)	mg/kg	26.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.16	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	4.7	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	3.2	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	6.4	ND	0.2
Lead/TTLC (EPA 6010)	mg/kg	1.3	ND	0.2
Mercury/TTLC (EPA 7471)	mg/kg	0.05	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.17	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	4.4	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	9.7	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	14.	ND	0.05

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FAX: (714) 891-5917

## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8931923-005  
Date Sampled: 15-NOV-1989  
Date Sample Rec'd: 15-NOV-1989  
Date Analyzed: 30-NOV-1989  
18-NOV-1989  
16-NOV-1989  
27-NOV-1989  
22-NOV-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: B-6-20'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1
Arsenic/TTLC (EPA 7061)	mg/kg	5.9	ND	0.50
Barium/TTLC (EPA 6010)	mg/kg	11.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.06	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	3.1	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	0.70	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	2.6	ND	0.2
Lead/TTLC (EPA 6010)	mg/kg	0.79	ND	0.2
Mercury/TTLC (EPA 7471)	mg/kg	0.02	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.10	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	2.8	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	3.8	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	5.2	ND	0.05

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**Laboratory Report**

-----  
 ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8931923-006  
 Date Sampled: 15-NOV-1989  
 Date Sample Rec'd: 15-NOV-1989  
 Date Analyzed: 30-NOV-1989  
 18-NOV-1989  
 16-NOV-1989  
 27-NOV-1989  
 22-NOV-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: B-6-20A'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1
Arsenic/TTLC (EPA 7061)	mg/kg	1.2	ND	0.10
Barium/TTLC (EPA 6010)	mg/kg	19.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.13	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	5.0	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	1.2	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	4.8	ND	0.2
Lead/TTLC (EPA 6010)	mg/kg	1.1	ND	0.2
Mercury/TTLC (EPA 7471)	mg/kg	ND	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.17	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	4.1	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	6.5	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	9.0	ND	0.05

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FAX: (714) 891-5917

## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8931923-007  
Date Sampled: 15-NOV-1989  
Date Sample Rec'd: 15-NOV-1989  
Date Analyzed: 30-NOV-1989  
18-NOV-1989  
16-NOV-1989  
27-NOV-1989  
22-NOV-1989  
5-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: HB-1-1'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	2.8	ND	1
Arsenic/TTLC (EPA 7061)	mg/kg	1.5	ND	0.10
Barium/TTLC (EPA 6010)	mg/kg	32.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.23	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	0.06	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	5.0	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	1.8	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	21.	ND	0.2
Lead/TTLC (EPA 6010)	mg/kg	4.0	ND	0.2
Mercury/TTLC (EPA 7471)	mg/kg	0.06	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.59	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	4.4	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	0.14	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	8.8	ND	0.05
Zinc/TTLC (EPA 7950)	mg/kg	46.	ND	1.0

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FAX: (714) 891-5917

## Laboratory Report

### ENSR CONSTRUCTORS

19782 MacArthur Blvd., Suite 365

Irvine, CA 92715

ATTN: Mr. Erik Nelson

Analysis No.: G-8931923-008

Date Sampled: 15-NOV-1989

Date Sample Rec'd: 15-NOV-1989

Date Analyzed: 30-NOV-1989

18-NOV-1989

16-NOV-1989

27-NOV-1989

22-NOV-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO

Sample ID: HB-1-5'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1
Arsenic/TTLC (EPA 7061)	mg/kg	0.99	ND	0.10
Barium/TTLC (EPA 6010)	mg/kg	36.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.14	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	5.3	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	2.2	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	9.9	ND	0.2
Lead/TTLC (EPA 6010)	mg/kg	2.6	ND	0.2
Mercury/TTLC (EPA 7471)	mg/kg	ND	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.26	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	4.0	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	7.9	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	16.	ND	0.05

The Report Cover Letter is an integral part of this report.

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**Enseco - CRL / South Coast**

7440 Lincoln Way • Garden Grove, CA 92641  
 (714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL  
 FAX: (714) 891-5917

**Laboratory Report**

-----  
 ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8931923-009  
 Date Sampled: 15-NOV-1989  
 Date Sample Rec'd: 15-NOV-1989  
 Date Analyzed: 30-NOV-1989  
 18-NOV-1989  
 16-NOV-1989  
 27-NOV-1989  
 22-NOV-1989  
 5-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: HB-2-1'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	25.	ND	1
Arsenic/TTLC (EPA 7061)	mg/kg	6.3	ND	0.50
Barium/TTLC (EPA 6010)	mg/kg	28.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.16	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	2.1	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	12.	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	3.1	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	22.	ND	0.2
Lead/TTLC (EPA 6010)	mg/kg	7.5	ND	0.2
Mercury/TTLC (EPA 7471)	mg/kg	0.26	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	7.6	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	22.	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	0.1	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	0.09	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	9.7	ND	0.05
Zinc/TTLC (EPA 7950)	mg/kg	67.	ND	2.0

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FAX: (714) 891-5917

## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8931923-010  
Date Sampled: 15-NOV-1989  
Date Sample Rec'd: 15-NOV-1989  
Date Analyzed: 30-NOV-1989  
18-NOV-1989  
16-NOV-1989  
5-DEC-1989  
27-NOV-1989  
22-NOV-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: HB-2-5'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	9.	ND	1
Arsenic/TTLC (EPA 7061)	mg/kg	47.	ND	4
Barium/TTLC (EPA 6010)	mg/kg	21.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.12	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	0.14	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	4.8	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	2.4	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	8.7	ND	0.2
Lead/TTLC (EPA 7420)	mg/kg	55.	ND	3.0
Mercury/TTLC (EPA 7471)	mg/kg	0.15	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.20	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	4.0	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	0.15	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	8.0	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	14.	ND	0.05

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 FAX: (714) 891-5917

**Laboratory Report**
**ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8931923-011

Date Sampled: 15-NOV-1989

Date Sample Rec'd: 15-NOV-1989

Date Analyzed: 6-DEC-1989

20-NOV-1989

27-NOV-1989

7-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB-2-5'

Parameter	Units	Result	Blank	Detection Limit
Antimony, STLC (EPA 200.7)	mg/L	3.3*	ND	1
Arsenic, STLC (EPA 206.3)	mg/L	0.53	ND	0.05
Barium, STLC (EPA 200.7)	mg/L	9.	ND	0.2
Beryllium, STLC (EPA 200.7)	mg/L	5.3	ND	0.2
Cadmium, STLC (EPA 200.7)	mg/L	0.4	ND	0.2
Chromium, STLC (EPA 200.7)	mg/L	0.7	ND	0.2
Chromium, Hexavalent, STLC (EPA 7196)	mg/L	ND	ND	0.05
Cobalt, STLC (EPA 200.7)	mg/L	0.6	ND	0.2
Copper, STLC (EPA 200.7)	mg/L	16.	ND	0.5
Lead, STLC (EPA 200.7)	mg/L	69.	ND	0.5
Mercury, STLC (EPA 245.1)	mg/L	ND	ND	0.005
Molybdenum, STLC (EPA 200.7)	mg/L	2.6	ND	0.2
Nickel, STLC (EPA 200.7)	mg/L	11.	ND	0.2
Selenium, STLC (EPA 270.3)	mg/L	ND	ND	0.01
Silver, STLC (EPA 200.7)	mg/L	ND	ND	0.2
Thallium, STLC (EPA 279.1)	mg/L	ND	ND	0.3
Vanadium, STLC (EPA 200.7)	mg/L	0.2	ND	0.2
Zinc, STLC (EPA 200.7)	mg/L	3,100.	ND	5

\* Antimony, STLC, exceeds antimony, TTLC, due to sample nonhomogeneity.

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## Laboratory Report

### ENSR CONSTRUCTORS

19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8931923-011

Date Sampled: 15-NOV-1989

Date Sample Rec'd: 15-NOV-1989

Date Analyzed: 30-NOV-1989

18-NOV-1989

16-NOV-1989

27-NOV-1989

22-NOV-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO

Sample ID: SB-2-5'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1
Arsenic/TTLC (EPA 7061)	mg/kg	3.7	ND	0.30
Barium/TTLC (EPA 6010)	mg/kg	68.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	47.	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	2.2	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	8.2	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	1.21	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	6.3	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	3,300.	ND	20
Lead/TTLC (EPA 6010)	mg/kg	700.	ND	20
Mercury/TTLC (EPA 7471)	mg/kg	0.16	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	11.	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	280.	ND	5
Selenium/TTLC (EPA 7741)	mg/kg	1.1	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	0.72	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	3.6	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	30,000.	ND	25

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## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8931923-012  
Date Sampled: 15-NOV-1989  
Date Sample Rec'd: 15-NOV-1989  
Date Analyzed: 30-NOV-1989  
18-NOV-1989  
16-NOV-1989  
6-DEC-1989  
27-NOV-1989  
22-NOV-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: SB-2-16'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	5.	ND	1
Arsenic/TTLC (EPA 7061)	mg/kg	200.	ND	20
Barium/TTLC (EPA 6010)	mg/kg	21.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	18.	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	0.78	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	13.	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	5.0	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	1,700.	ND	100
Lead/TTLC (EPA 7420)	mg/kg	420.	ND	25
Mercury/TTLC (EPA 7471)	mg/kg	0.04	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	6.3	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	39.	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	1.4	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	0.25	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	4.1	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	20,000.	ND	25

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FAX: (714) 891-5917

## Laboratory Report

### ENSR CONSTRUCTORS

19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715

ATTN: Mr. Erik Nelson

Project: (9500-089) KRAMER - EL SEGUNDO

Analysis No.: G-8931923-001/012

Date Sampled: 15-NOV-1989

Date Sample Rec'd: 15-NOV-1989

Sample Type: SOLID

## QA/QC Summary

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
7-DEC-1989	ALUMINUM (EPA 200.7)	L	97	60-130	4.	30
6-DEC-1989	MANGANESE (EPA 200.7)	L	102	60-130	4.	40
6-DEC-1989	ANTIMONY (EPA 200.7)	L	102	68-137	1.	30
6-DEC-1989	BARIUM (EPA 200.7)	L	102	63-137	5.	30
6-DEC-1989	BERYLLIUM (EPA 200.7)	L	100	66-130	4.	30
6-DEC-1989	CADMIUM (EPA 200.7)	L	100	72-141	3.	25
6-DEC-1989	CHROMIUM (EPA 200.7)	L	105	69-148	2.	30
6-DEC-1989	COBALT (EPA 200.7)	L	100	73-132	2.	30
6-DEC-1989	COPPER (EPA 200.7)	L	97	68-129	5.	25
6-DEC-1989	LEAD (EPA 200.7)	L	101	65-144	2.	25
6-DEC-1989	MOLYBDENUM (EPA 200.7)	L	105	69-144	1.	25
6-DEC-1989	NICKEL (EPA 200.7)	L	102	65-146	4.	25
6-DEC-1989	SILVER (EPA 200.7)	L	100	25-147	5.	52
6-DEC-1989	VANADIUM (EPA 200.7)	L	103	73-130	3.	25
7-DEC-1989	ZINC (EPA 200.7)	L	98	73-138	3.	25
6-DEC-1989	ARSENIC (EPA 206.3)	L	108	78-118	5.	25
4-DEC-1989	MANGANESE (EPA 243.1)	L	90	60-130	4.	40
27-NOV-1989	MERCURY (EPA 245.1)	L	100	41-137	0.	37
7-DEC-1989	SELENIUM (EPA 270.3)	L	118	41-137	6.	25
7-DEC-1989	THALLIUM (EPA 279.1)	L	90	75-109	0.	25
30-NOV-1989	ALUMINUM (EPA 6010)	L	91	60-130	4.	30
30-NOV-1989	IRON (EPA 6010)	L	90	60-130	1.	30
30-NOV-1989	ANTIMONY (EPA 6010)	L	68	15-169	1.	95
30-NOV-1989	BARIUM (EPA 6010)	L	74	15-155	2.	95
30-NOV-1989	BERYLLIUM (EPA 6010)	L	78	18-110	2.	35
30-NOV-1989	CADMIUM (EPA 6010)	L	74	18-126	0.	95
30-NOV-1989	CHROMIUM (EPA 6010)	L	82	15-210	1.	95
30-NOV-1989	COBALT (EPA 6010)	L	80	15-132	1.	45
30-NOV-1989	COPPER (EPA 6010)	L	78	15-161	1.	77
30-NOV-1989	LEAD (EPA 6010)	L	78	22-166	2.	95
30-NOV-1989	MOLYBDENUM (EPA 6010)	L	80	15-130	2.	92
30-NOV-1989	NICKEL (EPA 6010)	L	83	16-142	1.	95
30-NOV-1989	SILVER (EPA 6010)	L	76	24-108	0.	95
30-NOV-1989	VANADIUM (EPA 6010)	L	83	25-139	0.	58
30-NOV-1989	ZINC (EPA 6010)	L	77	15-164	3.	95
18-NOV-1989	ARSENIC (EPA 7061)	L	74	47-190	2.	30
16-NOV-1989	CHROMIUM, HEX/TTLC (EPA	L	104	60-130	0.	40

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**Laboratory Report**

-----  
 ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson  
 Project: (9500-089) KRAMER - EL SEGUNDO  
 -----

Analysis No.: G-8931923-001/012  
 Date Sampled: 15-NOV-1989  
 Date Sample Rec'd: 15-NOV-1989  
 Sample Type: SOLID  
 -----

**QA/QC Summary**

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
20-NOV-1989	CHROMIUM, HEXAVALENT (EPA 7196)	L	104	60-130	4.	40
6-DEC-1989	LEAD (EPA 7420)	L	74	35-180	5.	40
28-NOV-1989	MERCURY (EPA 7471)	L	106	25-125	2.	51
18-NOV-1989	SELENIUM (EPA 7741)	L	68	30-103	2.	30
22-NOV-1989	THALLIUM (EPA 7840)	L	57	42-127	11.	39
5-DEC-1989	ZINC (EPA 7950)	L	71	65-138	10.	25\

M = Matrix Spike

L = Laboratory Control Sample Spike

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[illegible]

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## CHAIN OF CUSTODY RECORD

931923

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO, CA</b>			ANALYSES			
Project No. <b>9500-089</b>			Field Logbook No. 			<div style="transform: rotate(-45deg); display: inline-block;"> <b>TUE 17 CAN WEENS</b>  <b>AL, FC, MAN</b>  <b>8240</b> </div> <div style="transform: rotate(-45deg); display: inline-block;"> <b>HOLD</b> </div>			
Sampler: (Signature) <b>Ben Riven</b>			Chain of Custody Tape No. 						
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample				REMARKS	
B-5- 5'	11-15-89			Soil	X	X			
10'									
15'									
20'									
20A'									
25'									
30'									
Relinquished by: (Signature) <b>Ken Pittman</b>				Date <b>11/15/89</b>	Time <b>7:30</b>	Received by: (Signature) 		Date <b>11/15/89</b>	Time <b>7:25 PM</b>
Relinquished by: (Signature) 				Date <b>11/15/89</b>	Time <b>6:25 PM</b>	Received by: (Signature) 		Date	Time
Relinquished by: (Signature) 				Date	Time	Received for Laboratory: (Signature) 		Date <b>11/15/89</b>	Time <b>6:25 PM</b>
Sample Disposal Method:				Disposed of by: (Signature) 				Date	Time
SAMPLE COLLECTOR <b>ENSR Corporation</b> 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321				ANALYTICAL LABORATORY <b>CRL</b>				<b>ENSR</b>	
								<b>1 of 3</b>	

931923

CHAIN OF CUSTODY RECORD

Client/Project Name <b>KRAMER</b>				Project Location <b>EL SEGUNDO,</b>				ANALYSES <div style="display: flex; justify-content: space-around; font-size: small;"> <div style="transform: rotate(-45deg);">UIC 17 CHIN METALS</div> <div>Al, Fe, Mn</div> <div>8240</div> <div>None</div> </div>			
Project No. <b>9500-089</b>				Field Logbook No. <b>/</b>							
Sampler: (Signature) <b>Bin Kram</b>				Chain of Custody Tape No. <b>/</b>							
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample					REMARKS		
B5-40'	11-15-89			SOIL					X		
<del>B5-40'</del> -50'	}			}					X		
B-6-5'						X	X				
-10'										X	
-15'										X	
-20'						X	X				
Relinquished by: (Signature) <b>Bin Kram</b>				Date <b>11-15-89</b>	Time	Received by: (Signature) <b>Paul Alcantara</b>			Date <b>11/15/89</b>	Time <b>8:23 P.M.</b>	
Relinquished by: (Signature) <b>Paul Alcantara</b>				Date <b>11-15-89</b>	Time <b>6:28 P.M.</b>	Received by: (Signature) <b>/</b>			Date	Time	
Relinquished by: (Signature) <b>/</b>				Date	Time	Received for Laboratory: (Signature) <b>/</b>			Date <b>11/15/89</b>	Time <b>6:28 P.M.</b>	
Sample Disposal Method:				Disposed of by: (Signature)						Date	Time
SAMPLE COLLECTOR  ENSR Corporation 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321				ANALYTICAL LABORATORY  <b>CRL</b>						ENSR	
										2 of 3	

WAITING TIME -> 1 HR.

# CHAIN OF CUSTODY RECORD

931923

4 of 6

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO, CA</b>			ANALYSES			
Project No. <b>9500-089</b>			Field Logbook No. /			<div style="transform: rotate(-45deg); display: inline-block;">             TUE 17 JAN 1989              AL, Fe, Mn              B240              HOLD           </div>			
Sampler: (Signature) <b>Bill Lauer</b>			Chain of Custody Tape No. /						
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample				REMARKS	
B-6-20A	11-15-89			Soil	X	X			
-25'	}			}				X	
-30'								X	
<del>-35'</del>								X	
-40'								X	
-50'								X	
Relinquished by: (Signature) <b>Bill Lauer</b>				Date <b>11-15-89</b>	Time	Received by: (Signature) <b>Paul Alcantara</b>		Date <b>11/15/89</b>	Time <b>3:22 PM</b>
Relinquished by: (Signature) <b>Paul Alcantara</b>				Date <b>11-15-89</b>	Time <b>6:28 PM</b>	Received by: (Signature) /		Date	Time
Relinquished by: (Signature) /				Date	Time	Received for Laboratory: (Signature) <b>[Signature]</b>		Date <b>11/15/89</b>	Time <b>6:28 PM</b>
Sample Disposal Method:				Disposed of by: (Signature) /				Date	Time
SAMPLE COLLECTOR  ENSR Corporation 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321				ANALYTICAL LABORATORY  <b>CPL</b>				<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>ENSR</b> </div>	
								3 of 3	

931923

5 of 6

## CHAIN OF CUSTODY RECORD

Client/Project Name <b>KRAUER</b>			Project Location			<div style="text-align: center;">ANALYSES</div> <div style="text-align: center;"> <i>TUE 17 CHL METALS</i>  <i>AL, Fe, MN</i>  <i>Hold</i> </div>						
Project No. <b>9500-089</b>			Field Logbook No.									
Sampler: (Signature) <i>Bill Ruver</i>			Chain of Custody Tape No.									
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	REMARKS							
HB-1-1'	11-15-89			SOIL	X	X						
HB-1-5'	}			}	X	X						
HB-2-1'					X	X						
HB-2-5'					X	X						
Relinquished by: (Signature) <i>Bill Ruver</i>				Date 11-15-89	Time	Received by: (Signature) <i>Paul A. Cantale</i>				Date 11/15/89	Time 3:22 PM	
Relinquished by: (Signature) <i>Paul A. Cantale</i>				Date 11/18/89	Time 6:26 PM	Received by: (Signature) _____				Date	Time	
Relinquished by: (Signature) _____				Date	Time	Received for Laboratory: (Signature) <i>Bill Ruver</i>				Date 11/15/89	Time 6:26 PM	
Sample Disposal Method:				Disposed of by: (Signature)				Date				Time
SAMPLE COLLECTOR				ANALYTICAL LABORATORY				<div style="text-align: center;"><b>ENSR</b></div> <div style="text-align: center;">1 of 1</div>				
ENSR Corporation 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321				CRL								



P.Q. # E1027891 JRD

931923

6 of 6

## CHAIN OF CUSTODY RECORD

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO</b>			ANALYSES							
Project No. <b>9500-089</b>			Field Logbook No.						<div style="writing-mode: vertical-rl; transform: rotate(180deg);"> CAM METALS +3 TTLC + STLC CAM METALS +3 TTLC ONLY TO BE DETERMINED </div>				
Sampler: (Signature) <i>Ken Pitchford</i>			Chain of Custody Tape No. <b>N/A</b>										
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample									
REMARKS													
<del>MT-8-</del>											WILL CALL FOR		
SB-2-5	11/15/89	3:00			X	X	HOLD				MT-8 MAKE-UP		
SB-2-16	11/15/89	3:00				X	HOLD				WATER DETERMINATION		
MAKE-UP MW-8 WATER	11/15/89	3:00			HOLD	HOLD	HOLD						
MAKE-UP MW-8 WATER	11/15/89	3:00			HOLD	HOLD	HOLD						
Relinquished by: (Signature) <i>Ken Pitchford</i>					Date 11/15/89	Time 3:00	Received by: (Signature) <i>Paul Alcantara</i>			Date 4/15/89	Time 3:21 P.M.		
Relinquished by: (Signature) <i>Paul Alcantara</i>					Date 11/15/89	Time 6:28 P.M.	Received by: (Signature)			Date	Time		
Relinquished by: (Signature)					Date	Time	Received for Laboratory: (Signature) <i>Ken Pitchford</i>			Date 11/15/89	Time 6:28 P.M.		
Sample Disposal Method:					Disposed of by: (Signature)					Date	Time		
SAMPLE COLLECTOR  ENSR Corporation 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321					ANALYTICAL LABORATORY  ENSECO LABORATORY GARDEN GROVE, CA					<b>ENSR</b>  P. 1/1			

**SECTION 4**

**Enseco - CRL / South Coast**

7440 Lincoln Way • Garden Grove, CA 92641  
(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL  
FAX: (714) 891-5917

RECEIVED

DEC 13 1989

Ans'd .....

December 7, 1989

ENSR CONSTRUCTORS  
19782 MACARTHUR BLVD., SUITE 365  
IRVINE, CA 92715  
ATTN: MR. ERIK NELSON

Analysis No.: G-8932035-001/005  
Date Sampled: 16-NOV-1989  
Date Sample Rec'd: 16-NOV-1989  
Project: (9500-089) KRAMER-EL SEGUNDO

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8932035-001/005 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

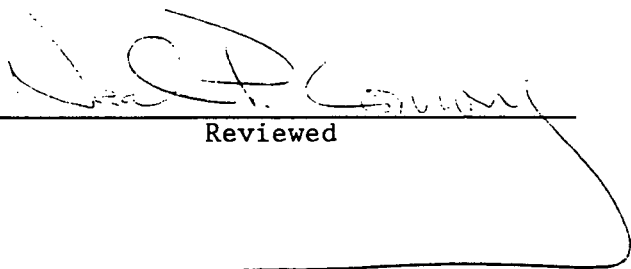
Solid samples are reported on "as received" basis.

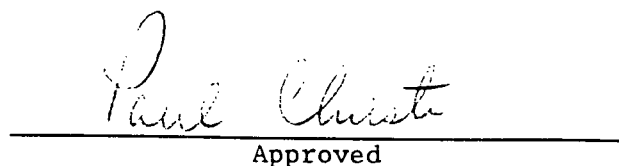
Preliminary data were provided on December 6, 1989 at 1:30 P.M.

Reference #: 39

Site Name: H. KRAMER

EPA ID#: CA0008260267

  
Reviewed

  
Approved

The Report Cover Letter is an integral part of this report.

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 FAX: (714) 891-5917

**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacARTHUR BLVD., SUITE 365  
 IRVINE, CA 92715  
 ATTN: MR. ERIK NELSON

Analysis No.: G-8932035-001/005  
 Date Sampled: 16-NOV-1989  
 Date Sample Rec'd: 16-NOV-1989  
 Date Analyzed: 30-NOV-1989  
 Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO

Sample ID	Aluminum mg/kg EPA 6010	Iron mg/kg EPA 6010	Manganese mg/kg EPA 6010
HB-3-1'	3100.	5300.	110.
HB-3-5'	1900.	3600.	39.
MW7-5'	2300.	4700.	50.
MW7-20'	690.	1800.	20.
MW7-20A'	840.	1900.	22.
Blank	ND(0.30)	ND(1.00)	ND(0.050)

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FAX: (714) 891-5917

## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacARTHUR BLVD., SUITE 365  
IRVINE, CA 92715  
ATTN: MR. ERIK NELSON

Analysis No.: G-8932035-001  
Date Sampled: 16-NOV-1989  
Date Sample Rec'd: 16-NOV-1989  
Date Analyzed: 30-NOV-1989  
1-DEC-1989  
21-NOV-1989  
27-NOV-1989  
4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: HB-3-1'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1.0
Arsenic/TTLC (EPA 7061)	mg/kg	0.98	ND	0.1
Barium/TTLC (EPA 6010)	mg/kg	23.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.15	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	0.05	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	4.1	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	1.8	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	2.8	ND	.2
Lead/TTLC (EPA 6010)	mg/kg	1.5	ND	.02
Mercury/TTLC (EPA 7471)	mg/kg	ND	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	1.1	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	3.2	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	9.9	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	8.2	ND	0.05

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FAX: (714) 891-5917

## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacARTHUR BLVD., SUITE 365  
IRVINE, CA 92715  
ATTN: MR. ERIK NELSON

Analysis No.: G-8932035-002  
Date Sampled: 16-NOV-1989  
Date Sample Rec'd: 16-NOV-1989  
Date Analyzed: 30-NOV-1989  
1-DEC-1989  
21-NOV-1989  
27-NOV-1989  
4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: HB-3-5'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1.0
Arsenic/TTLC (EPA 7061)	mg/kg	1.2	ND	0.1
Barium/TTLC (EPA 6010)	mg/kg	13.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.11	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	3.0	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	1.1	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	23.	ND	.2
Lead/TTLC (EPA 6010)	mg/kg	1.6	ND	.2
Mercury/TTLC (EPA 7471)	mg/kg	0.03	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.25	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	2.2	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	6.4	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	16.	ND	0.05

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacARTHUR BLVD., SUITE 365  
 IRVINE, CA 92715  
 ATTN: MR. ERIK NELSON

Analysis No.: G-8932035-003  
 Date Sampled: 16-NOV-1989  
 Date Sample Rec'd: 16-NOV-1989  
 Date Analyzed: 30-NOV-1989  
 1-DEC-1989  
 21-NOV-1989  
 27-NOV-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: MW7-5'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1.0
Arsenic/TTLC (EPA 7061)	mg/kg	1.3	ND	0.1
Barium/TTLC (EPA 6010)	mg/kg	14.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.13	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	3.6	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	1.4	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	4.6	ND	.2
Lead/TTLC (EPA 6010)	mg/kg	1.4	ND	.2
Mercury/TTLC (EPA 7471)	mg/kg	0.02	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.05	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	3.3	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	7.5	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	8.9	ND	0.05

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 FAX: (714) 891-5917

**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacARTHUR BLVD., SUITE 365  
 IRVINE, CA 92715  
 ATTN: MR. ERIK NELSON

Analysis No.: G-8932035-004  
 Date Sampled: 16-NOV-1989  
 Date Sample Rec'd: 16-NOV-1989  
 Date Analyzed: 30-NOV-1989  
 1-DEC-1989  
 21-NOV-1989  
 27-NOV-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: MW7-20'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1.0
Arsenic/TTLC (EPA 7061)	mg/kg	0.95	ND	0.1
Barium/TTLC (EPA 6010)	mg/kg	6.1	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	1.5	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	0.47	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	12.	ND	.2
Lead/TTLC (EPA 6010)	mg/kg	0.54	ND	.2
Mercury/TTLC (EPA 7471)	mg/kg	ND	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	2.0	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	2.3	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	15.	ND	0.05

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FAX: (714) 891-5917

## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacARTHUR BLVD., SUITE 365  
IRVINE, CA 92715  
ATTN: MR. ERIK NELSON

Analysis No.: G-8932035-005  
Date Sampled: 16-NOV-1989  
Date Sample Rec'd: 16-NOV-1989  
Date Analyzed: 30-NOV-1989  
1-DEC-1989  
21-NOV-1989  
27-NOV-1989  
4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: MW7-20A'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1.0
Arsenic/TTLC (EPA 7061)	mg/kg	0.98	ND	0.1
Barium/TTLC (EPA 6010)	mg/kg	6.7	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	1.9	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	0.53	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	7.6	ND	.2
Lead/TTLC (EPA 6010)	mg/kg	0.59	ND	.2
Mercury/TTLC (EPA 7471)	mg/kg	ND	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	2.1	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	2.5	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	7.1	ND	0.05

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# **Enseco - CRL / South Coast**

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(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL  
FAX: (714) 891-5917

## **Laboratory Report**

ENSR CONSTRUCTORS  
19782 MacARTHUR BLVD., SUITE 365  
IRVINE, CA 92715  
ATTN: MR. ERIK NELSON  
Project: (9500-089) KRAMER - EL SEGUNDO

Analysis No.: G-8932035-001/005  
Date Sampled: 16-NOV-1989  
Date Sample Rec'd: 16-NOV-1989  
Sample Type: SOLID

## **QA/QC Summary**

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
30-NOV-1989	ALUMINUM (EPA 6010)	L	91	60-130	4.	30
30-NOV-1989	IRON (EPA 6010)	L	90	60-130	1.	30
30-NOV-1989	MANGANESE (EPA 6010)	L	87	60-130	2.	30
30-NOV-1989	ANTIMONY (EPA 6010)	L	68	15-169	1.	95
30-NOV-1989	BARIUM (EPA 6010)	L	74	15-155	2.	95
30-NOV-1989	BERYLLIUM (EPA 6010)	L	78	18-110	2.	35
30-NOV-1989	CADMIUM (EPA 6010)	L	74	18-126	0.	95
30-NOV-1989	CHROMIUM (EPA 6010)	L	82	15-210	1.	95
30-NOV-1989	COBALT (EPA 6010)	L	80	15-132	1.	45
30-NOV-1989	COPPER (EPA 6010)	L	78	15-161	1.	77
30-NOV-1989	LEAD (EPA 6010)	L	78	22-166	2.	95
30-NOV-1989	MOLYBDENUM (EPA 6010)	L	80	15-130	2.	92
30-NOV-1989	NICKEL (EPA 6010)	L	83	16-142	1.	95
30-NOV-1989	SILVER (EPA 6010)	L	76	24-108	0.	95
30-NOV-1989	VANADIUM (EPA 6010)	L	83	25-139	0.	58
30-NOV-1989	ZINC (EPA 6010)	L	77	15-164	3.	95
1-DEC-1989	ARSENIC (EPA 7061)	L	68	47-190	4.	30
21-NOV-1989	CHROMIUM, HEX/TTL (EPA 7196)	L	97	60-130	6.	40
27-NOV-1989	MERCURY (EPA 7471)	L	101	25-125	3.	51
4-DEC-1989	SELENIUM (EPA 7741)	L	67	30-103	8.	30
4-DEC-1989	THALLIUM (EPA 7840)	L	69	42-127	1.	39

M = Matrix Spike

L = Laboratory Control Sample Spike

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932035

## CHAIN OF CUSTODY RECORD

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO, CA</b>			ANALYSES <div style="display: flex; justify-content: space-around; font-size: small;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TLC 17 CANAL METALS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">AL, Fe, Mn</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">B240</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">HOLD</div> </div>						
Project No. <b>9500-089</b>			Field Logbook No. /									
Sampler: (Signature) <b>Bin Ruven</b>			Chain of Custody Tape No. /									
Sample No. / Identification	Date	Time	Lab Sample Number	Type of Sample							REMARKS	
MW 7-5'	11-16-89	1430	932035-003	Soil	X	X						
10	{		006	{							X	
15			007							X		
20			004		X	X						
20A			005		X	X						
25			008							X		
30			009							X		
40			010								X	
Relinquished by: (Signature) <b>Bin Ruven</b>				Date 11-16-89	Time 1430	Received by: (Signature) <b>Paul A. Cautela</b>				Date 11/16/89	Time 2:35 PM	
Relinquished by: (Signature) <b>Paul A. Cautela</b>				Date 11/16/89	Time 6:24 PM	Received by: (Signature)				Date	Time	
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <b>[Signature]</b>				Date 11-16-89	Time 6:25 PM	
Sample Disposal Method:				Disposed of by: (Signature)						Date	Time	
SAMPLE COLLECTOR  ENSR Corporation 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321				ANALYTICAL LABORATORY  CRL						<b>ENSR</b> 1 of 2		

932035

## CHAIN OF CUSTODY RECORD

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO, CA</b>			ANALYSES <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TLC</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">17 CANAL METALS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Al, Fe, Mn</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8240</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">HOLD</div> </div>						
Project No. <b>9500-089</b>			Field Logbook No. <div style="border-bottom: 1px solid black; height: 1em;"></div>									
Sampler: (Signature) <b>Bill Lauer</b>			Chain of Custody Tape No. <div style="border-bottom: 1px solid black; height: 1em;"></div>									
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	REMARKS							
MW7- 50'	11-16-89	1430	932035-011	SOIL						X		
60'	↓	↓	- 012	↓						X		
70			- 013							X		
80			- 014							X		
90			- 015							X		
*MW6-80			- 016									
					* added per Bill Lauer 11/17/89 - SAMPLE RECEIVED							
Relinquished by: (Signature) <b>Bill Lauer</b>				Date 11/16/89	Time 1430	Received by: (Signature) <b>Dr. C. Cautera</b>				Date 11/16/89	Time 2:35 PM	
Relinquished by: (Signature) <b>Paul V. Cautera</b>				Date 11/16/89	Time 6:25 PM	Received by: (Signature)				Date	Time	
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <b>Paul V. Cautera</b>				Date 11-16-89	Time 6:25 pm	
Sample Disposal Method:				Disposed of by: (Signature)				Date				Time
SAMPLE COLLECTOR ENSR Corporation 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321					ANALYTICAL LABORATORY					ENSR		
										2 of 2		

## CHAIN OF CUSTODY RECORD

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO, CA</b>			ANALYSES						
Project No. <b>9500-089</b>			Field Logbook No. <b>/</b>			<div>TIC 17 CAN MMS Al, Fe, Mn 8240 Hard</div>						
Sampler: (Signature) <b>Bin Luven</b>			Chain of Custody Tape No. <b>/</b>									
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample								REMARKS
<b>HB-3-1'</b>	<b>11-16-89</b>	<b>1430</b>	<b>932035-001</b>	<b>Soil</b>	<b>X</b>	<b>X</b>						
<b>HB-3-5'</b>	<b>"</b>	<b>+</b>	<b>002</b>	<b>"</b>	<b>X</b>	<b>X</b>						
<b><del>HB-3-1'</del></b>												
Relinquished by: (Signature) <b>Bin Luven</b>				Date <b>11/16/89</b>	Time <b>1430</b>	Received by: (Signature) <b>Paul Alcantara</b>				Date <b>11/16/89</b>	Time <b>2:25 PM</b>	
Relinquished by: (Signature) <b>Paul Alcantara</b>				Date <b>11/16/89</b>	Time <b>6:05 PM</b>	Received by: (Signature)				Date	Time	
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <b>[Signature]</b>				Date <b>11-16-89</b>	Time <b>6:25 PM</b>	
Sample Disposal Method:				Disposed of by: (Signature) <b>[Signature]</b>						Date	Time	
SAMPLE COLLECTOR ENSR CORP. 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321				ANALYTICAL LABORATORY <b>CRL</b>						ENSR		
1 of 1												

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DEC 18 1989

Ans'd .....

December 14, 1989

ENSR CONSTRUCTORS  
19782 MACARTHUR BLVD., SUITE 365  
IRVINE, CA 92715  
ATTN: MR. ERIK NELSON

Analysis No.: G-8932612-001/002  
Date Sampled: 17-NOV-1989  
Date Sample Rec'd: 17-NOV-1989  
Project: (9500-089) KRAMER-EL SEGUNDO

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8932612-001/002 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached. Sample seals were intact.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

Solid samples are reported on "as received" basis.

Preliminary data were provided on December 12, 1989 at 10:05 A.M.

  
\_\_\_\_\_  
Reviewed  
\_\_\_\_\_  
Approved

The Report Cover Letter is an integral part of this report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

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FAX: (714) 891-5917

**Laboratory Report****ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8932612-001/002

Date Sampled: 17-NOV-1989

Date Sample Rec'd: 17-NOV-1989

Date Analyzed: 8-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO

Sample ID	Aluminum/	Iron/TTLC	Manganese/
	TTLC		TTLC
	mg/kg EPA 6010	mg/kg EPA 6010	mg/kg EPA 6010
MW6-5	8,100.	6,100.	150.
MW6-20	1,700.	3,500.	34.
Blank	ND(0.060)	ND(0.060)	ND(0.1)

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932612-001  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 8-DEC-1989  
 1-DEC-1989  
 28-NOV-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: MW6-5

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1.0
Arsenic/TTLC (EPA 7061)	mg/kg	1.3	ND	0.1
Barium/TTLC (EPA 6010)	mg/kg	29.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.21	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	0.1	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	5.47	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	2.48	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	7.53	ND	0.05
Lead/TTLC (EPA 6010)	mg/kg	1.66	ND	0.05
Mercury/TTLC (EPA 7471)	mg/kg	0.02	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.09	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	4.35	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	11.	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	16.	ND	0.05

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 FAX: (714) 891-5917

**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932612-002  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 8-DEC-1989  
 1-DEC-1989  
 28-NOV-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: MW6-20

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1.0
Arsenic/TTLC (EPA 7061)	mg/kg	3.9	ND	0.3
Barium/TTLC (EPA 6010)	mg/kg	13.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.07	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	0.07	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	2.97	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	0.83	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	5.41	ND	0.05
Lead/TTLC (EPA 6010)	mg/kg	1.11	ND	0.05
Mercury/TTLC (EPA 7471)	mg/kg	0.03	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.11	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	2.94	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	3.92	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	14.	ND	0.05

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FAX: (714) 891-5917

## Laboratory Report

### ENSR CONSTRUCTORS

19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715

ATTN: Mr. Erik Nelson

Project: (9500-089) KRAMER - EL SEGUNDO

Analysis No.: G-8932612-001/002

Date Sampled: 17-NOV-1989

Date Sample Rec'd: 17-NOV-1989

Sample Type: SOLID

### QA/QC Summary

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
8-DEC-1989	ALUMINUM (EPA 6010)	L	100	60-130	0.	30
8-DEC-1989	IRON (EPA 6010)	L	98	60-130	2.	30
8-DEC-1989	MANGANESE (EPA 6010)	L	85	60-130	8.	30
8-DEC-1989	ANTIMONY (EPA 6010)	L	73	15-169	3.	95
8-DEC-1989	BARIUM (EPA 6010)	L	78	15-155	3.	95
8-DEC-1989	BERYLLIUM (EPA 6010)	L	82	18-110	3.	35
8-DEC-1989	CADMIUM (EPA 6010)	L	84	18-126	4.	95
8-DEC-1989	CHROMIUM (EPA 6010)	L	86	15-210	5.	95
8-DEC-1989	COBALT (EPA 6010)	L	84	15-132	2.	45
8-DEC-1989	COPPER (EPA 6010)	L	81	15-161	3.	77
8-DEC-1989	LEAD (EPA 6010)	L	83	22-166	4.	95
8-DEC-1989	MOLYBDENUM (EPA 6010)	L	88	15-130	3.	92
8-DEC-1989	NICKEL (EPA 6010)	L	85	16-142	2.	95
8-DEC-1989	SILVER (EPA 6010)	L	80	24-108	1.	95
8-DEC-1989	VANADIUM (EPA 6010)	L	84	25-139	5.	58
8-DEC-1989	ZINC (EPA 6010)	L	84	15-164	3.	95
1-DEC-1989	ARSENIC (EPA 7061)	L	81	47-190	12.	30
28-NOV-1989	CHROMIUM, HEX/TTLC (EPA 7196)	L	105	60-130	2.	40
1-DEC-1989	MERCURY (EPA 7471)	L	102	25-125	3.	51
4-DEC-1989	SELENIUM (EPA 7741)	L	68	30-103	2.	30
8-DEC-1989	THALLIUM (EPA 7840)	L	69	42-127	3.	39

M = Matrix Spike

L = Laboratory Control Sample Spike

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# CHAIN OF CUSTODY RECORD

932612

Client/Project Name <b>KRAMER</b>				Project Location <b>El Segundo</b>				<div style="border: 1px solid black; padding: 5px;">ANALYSES</div> <div style="border: 1px solid black; padding: 5px; transform: rotate(-45deg); display: inline-block;">Hold</div>			
Project No. <b>9500-089</b>				Field Logbook No. _____							
Sampler: (Signature) <i>Christina Stutter</i>				Chain of Custody Tape No. _____							
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample					REMARKS		
MWG-50	11/16	}									
60											
70											
<del>80</del>											
Relinquished by: (Signature) <i>Christina Stutter</i>				Date <b>11/17/89</b>	Time <b>5:30p</b>	Received by: (Signature) _____			Date _____	Time _____	
Relinquished by: (Signature) _____				Date _____	Time _____	Received by: (Signature) _____			Date _____	Time _____	
Relinquished by: (Signature) _____				Date _____	Time _____	Received for Laboratory: (Signature) <i>[Signature]</i>			Date <b>11/17/89</b>	Time <b>5:30pm</b>	
Sample Disposal Method: _____				Disposed of by: (Signature) _____					Date _____	Time _____	
SAMPLE COLLECTOR <b>ENSR Corporation</b> <b>19782 MacArthur Blvd., STE 365</b> <b>Irvine, CA 92715</b> <b>(714) 476-0321</b>				ANALYTICAL LABORATORY   					<div style="border: 1px solid black; padding: 5px; font-weight: bold; font-size: 1.5em;">ENSR</div>		
									<div style="border: 1px solid black; padding: 5px; font-size: 1.5em;">2 of 2</div>		

# CHAIN OF CUSTODY RECORD

932612

Client/Project Name <b>KRAMER</b>			Project Location <b>El Segundo</b>			<div style="display: flex; justify-content: space-around;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TLC 17 Cammetals</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Al, Fe, Mn</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8240</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Hold</div> </div>					
Project No. <b>9500-089</b>			Field Logbook No. <b>/</b>								
Sampler: (Signature) <i>Christa Stuber</i>			Chain of Custody Tape No. <b>/</b>								

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	TLC 17 Cammetals	Al, Fe, Mn	8240	Hold	REMARKS
MWB-5	11/16				X	X			
-10	}	}							
-15									
-20									
-25									
-25A									
-30									
-40									

Relinquished by: (Signature) <i>Christa Stuber</i>		Date <b>11/17/89</b>	Time <b>5:30 PM</b>	Received by: (Signature) <i>[Signature]</i>		Date	Time
Relinquished by: (Signature) <i>[Signature]</i>		Date	Time	Received by: (Signature) <i>[Signature]</i>		Date	Time
Relinquished by: (Signature) <i>[Signature]</i>		Date	Time	Received for Laboratory: (Signature) <i>[Signature]</i>		Date <b>11/17/89</b>	Time <b>5:30 PM</b>
Sample Disposal Method:		Disposed of by: (Signature) <i>[Signature]</i>				Date	Time

SAMPLE COLLECTOR ENSR Corporation 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321	ANALYTICAL LABORATORY     <div style="text-align: center; font-weight: bold; font-size: 1.5em;">ENSR</div> <div style="text-align: center; margin-top: 10px;">1 of 2</div>
--	---

SECTION 5

**Enseco - CRL / South Coast**

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(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL  
FAX: (714) 891-5917

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JAN 2 1990

Ans'd .....

December 28, 1989

ENSR CONSTRUCTORS  
19782 MACARTHUR BLVD., STE. 365  
IRVINE, CA 92715-2417  
ATTN: MR. ERIK NELSON

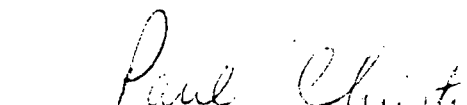
Analysis No.: G-8932420-001/007  
Date Sampled: 17/20-NOV-1989  
Date Sample Rec'd: 20-NOV-1989  
Project: (9500-089) KRAMER - EL SEGUNDO

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8932420-001/007 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

Solid samples are reported on "as received" basis.

  
\_\_\_\_\_  
Reviewed  
\_\_\_\_\_  
Approved

The Report Cover Letter is an integral part of this report.

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**Enseco - CRL / South Coast**

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 FAX: (714) 891-5917

**Laboratory Report**
**ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932420-001/006

Date Sampled: 17-NOV-1989

20-NOV-1989

Date Sample Rec'd: 20-NOV-1989

Date Analyzed: 7-DEC-1989

6-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO

Sample ID	Aluminum/ TTL	Iron/TTL	Manganese/ TTL
	mg/kg	mg/kg	mg/kg
	EPA 6010	EPA 6010	EPA 6010
SB6-5'	6,420.	19,400.	696.
SB6-15'	4,710.	5,310.	283.
SB6-30'	1,220.	2,270.	16.2
MW4-5'	2,510.	5,640.	68.8
MW4-20'	2,630.	4,310.	95.6
MW4-20xxx	2,780.	4,730.	94.9
Blank	ND(10.)	ND(10.)	ND(1.)

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## **Laboratory Report**

### **ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365

Irvine, CA 92715

ATTN: Mr. Erik Nelson

Analysis No.: G-8932420-001/001

Date Sampled: 17-NOV-1989

Date Sample Rec'd: 20-NOV-1989

Date Analyzed: 6-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO

Sample ID	Aluminum/ STLC	Iron/STLC	Manganese/ STLC
	mg/L	mg/L	mg/L
	EPA 200.7	EPA 200.7	EPA 200.7
SB6-5'	272.	1,040.	53.9
Blank	ND(0.5)	ND(0.5)	ND(0.05)

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 FAX: (714) 891-5917

**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932420-001  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 20-NOV-1989  
 Date Analyzed: 7-DEC-1989  
 1-DEC-1989  
 28-NOV-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB6-5'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	17.	ND	5.
Arsenic/TTLC (EPA 7061)	mg/kg	16.	ND	1.0
Barium/TTLC (EPA 6010)	mg/kg	138.	ND	1.
Beryllium/TTLC (EPA 6010)	mg/kg	21.2	ND	0.2
Cadmium/TTLC (EPA 6010)	mg/kg	8.6	ND	0.5
Chromium, Total/TTLC (EPA 6010)	mg/kg	10.	ND	1.
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	3.6	ND	1.
Copper/TTLC (EPA 6010)	mg/kg	53,800.	ND	125.
Lead/TTLC (EPA 6010)	mg/kg	713.	ND	5.
Mercury/TTLC (EPA 7471)	mg/kg	0.80	ND	0.1
Molybdenum/TTLC (EPA 6010)	mg/kg	4.	ND	2.
Nickel/TTLC (EPA 6010)	mg/kg	80.5	ND	4.
Selenium/TTLC (EPA 7741)	mg/kg	1.0	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	3.1	ND	1.
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	8.4	ND	1.
Zinc/TTLC (EPA 6010)	mg/kg	41,400.	ND	125.

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# Enseco - CRL / South Coast

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FAX: (714) 891-5917

## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8932420-001  
Date Sampled: 17-NOV-1989  
Date Sample Rec'd: 20-NOV-1989  
Date Analyzed: 6-DEC-1989  
28-NOV-1989  
1-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: SB6-5'

Parameter	Units	Result	Blank	Detection Limit
Antimony, STLC (EPA 200.7)	mg/L	7.4	ND	0.25
Arsenic, STLC (EPA 206.3)	mg/L	0.91	ND	0.5
Barium, STLC (EPA 200.7)	mg/L	6.1	ND	0.05
Beryllium, STLC (EPA 200.7)	mg/L	1.5	ND	0.01
Cadmium, STLC (EPA 200.7)	mg/L	1.5	ND	0.02R
Chromium, STLC (EPA 200.7)	mg/L	0.63	ND	0.05
Chromium, Hexavalent, STLC (EPA 7196)	mg/L	ND	ND	0.05
Cobalt, STLC (EPA 200.7)	mg/L	0.57	ND	0.05
Copper, STLC (EPA 200.7)	mg/L	178.	ND	0.05
Lead, STLC (EPA 200.7)	mg/L	49.	ND	0.25
Mercury, STLC (EPA 245.1)	mg/L	ND	ND	0.005
Molybdenum, STLC (EPA 200.7)	mg/L	0.7	ND	0.1
Nickel, STLC (EPA 200.7)	mg/L	2.8	ND	0.2
Selenium, STLC (EPA 270.3)	mg/L	1.6	ND	1.
Silver, STLC (EPA 200.7)	mg/L	ND	ND	0.05
Thallium, STLC (EPA 279.1)	mg/L	ND	ND	10.
Vanadium, STLC (EPA 200.7)	mg/L	0.61	ND	0.05
Zinc, STLC (EPA 200.7)	mg/L	2,460.	ND	0.5

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**Enseco - CRL / South Coast**

7440 Lincoln Way • Garden Grove, CA 92641  
 (714) 898-6370 • (213) 598-0458 • (800) LAB-I-CRL  
 FAX: (714) 891-5917

**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932420-002  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 20-NOV-1989  
 Date Analyzed: 6-DEC-1989  
 1-DEC-1989  
 28-NOV-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB6-15'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	4.9
Arsenic/TTLC (EPA 7061)	mg/kg	220.	ND	20
Barium/TTLC (EPA 6010)	mg/kg	49.4	ND	0.99
Beryllium/TTLC (EPA 6010)	mg/kg	0.32	ND	0.2
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.49
Chromium, Total/TTLC (EPA 6010)	mg/kg	5.9	ND	0.99
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	4.0	ND	0.99
Copper/TTLC (EPA 6010)	mg/kg	13.5	ND	0.99
Lead/TTLC (EPA 6010)	mg/kg	ND	ND	4.9
Mercury/TTLC (EPA 7471)	mg/kg	ND	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	2.
Nickel/TTLC (EPA 6010)	mg/kg	6.3	ND	4.
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.99
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	13.2	ND	0.99
Zinc/TTLC (EPA 6010)	mg/kg	23.7	ND	0.99

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932420-003  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 20-NOV-1989  
 Date Analyzed: 6-DEC-1989  
 1-DEC-1989  
 28-NOV-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB6-30'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	4.9
Arsenic/TTLC (EPA 7061)	mg/kg	2.4	ND	0.2
Barium/TTLC (EPA 6010)	mg/kg	6.9	ND	0.99
Beryllium/TTLC (EPA 6010)	mg/kg	ND	ND	0.2
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.49
Chromium, Total/TTLC (EPA 6010)	mg/kg	3.3	ND	0.99
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	ND	ND	0.99
Copper/TTLC (EPA 6010)	mg/kg	10.5	ND	0.99
Lead/TTLC (EPA 6010)	mg/kg	ND	ND	4.9
Mercury/TTLC (EPA 7471)	mg/kg	ND	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	2.
Nickel/TTLC (EPA 6010)	mg/kg	ND	ND	4.
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.99
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	5.3	ND	0.99
Zinc/TTLC (EPA 6010)	mg/kg	15.7	ND	0.99

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## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8932420-004  
Date Sampled: 20-NOV-1989  
Date Sample Rec'd: 20-NOV-1989  
Date Analyzed: 6-DEC-1989  
1-DEC-1989  
28-NOV-1989  
4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: MW4-5'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	5.2	ND	4.9
Arsenic/TTLC (EPA 7061)	mg/kg	2.3	ND	0.2
Barium/TTLC (EPA 6010)	mg/kg	33.7	ND	0.97
Beryllium/TTLC (EPA 6010)	mg/kg	ND	ND	0.19
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.49
Chromium, Total/TTLC (EPA 6010)	mg/kg	7.5	ND	0.97
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	2.6	ND	0.97
Copper/TTLC (EPA 6010)	mg/kg	11.3	ND	0.97
Lead/TTLC (EPA 6010)	mg/kg	16.	ND	4.9
Mercury/TTLC (EPA 7471)	mg/kg	0.03	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	1.9
Nickel/TTLC (EPA 6010)	mg/kg	8.8	ND	3.9
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.97
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	16.3	ND	0.97
Zinc/TTLC (EPA 6010)	mg/kg	25.	ND	0.97

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932420-005  
 Date Sampled: 20-NOV-1989  
 Date Sample Rec'd: 20-NOV-1989  
 Date Analyzed: 6-DEC-1989  
 1-DEC-1989  
 28-NOV-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: MW4-20'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	4.8
Arsenic/TTLC (EPA 7061)	mg/kg	430.	ND	40
Barium/TTLC (EPA 6010)	mg/kg	25.1	ND	0.97
Beryllium/TTLC (EPA 6010)	mg/kg	ND	ND	0.19
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.48
Chromium, Total/TTLC (EPA 6010)	mg/kg	5.	ND	0.97
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	1.9	ND	0.97
Copper/TTLC (EPA 6010)	mg/kg	8.8	ND	0.97
Lead/TTLC (EPA 6010)	mg/kg	ND	ND	4.8
Mercury/TTLC (EPA 7471)	mg/kg	0.02	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	1.9
Nickel/TTLC (EPA 6010)	mg/kg	4.8	ND	3.9
Selenium/TTLC (EPA 7741)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.97
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	8.2	ND	0.97
Zinc/TTLC (EPA 6010)	mg/kg	13.1	ND	0.97

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932420-006  
 Date Sampled: 20-NOV-1989  
 Date Sample Rec'd: 20-NOV-1989  
 Date Analyzed: 6-DEC-1989  
 1-DEC-1989  
 28-NOV-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: MW4-20xxx

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	19.5	ND	4.8
Arsenic/TTLC (EPA 7061)	mg/kg	350.	ND	30
Barium/TTLC (EPA 6010)	mg/kg	30.	ND	0.97
Beryllium/TTLC (EPA 6010)	mg/kg	ND	ND	0.19
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.48
Chromium, Total/TTLC (EPA 6010)	mg/kg	5.3	ND	0.97
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	2.4	ND	0.97
Copper/TTLC (EPA 6010)	mg/kg	27.5	ND	0.97
Lead/TTLC (EPA 6010)	mg/kg	ND	ND	4.8
Mercury/TTLC (EPA 7471)	mg/kg	0.22	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	1.9
Nickel/TTLC (EPA 6010)	mg/kg	4.5	ND	3.9
Selenium/TTLC (EPA 7741)	mg/kg	0.1	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.97
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	8.9	ND	0.97
Zinc/TTLC (EPA 6010)	mg/kg	25.4	ND	0.97

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**Laboratory Report**

-----  
 ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932420-007  
 Date Sampled: 20-NOV-1989  
 Date Sample Rec'd: 20-NOV-1989  
 Date Analyzed: 28-NOV-1989  
 Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: MW4-60'

 -----  
**Purgeable Organics, EPA 8240**

Units: ug/kg

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Acetone	15.*	ND	10
Carbon Disulfide	ND	ND	5
Trichlorofluoromethane	ND	ND	5
1,1-Dichloroethene	ND	ND	5
1,1-Dichloroethane	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	ND	ND	5
1,2-Dichloroethane	ND	ND	5
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
Trichloroethene	ND	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	ND	ND	5
cis-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylenes, Total	ND	ND	5

\* The analytical results for Acetone should not be considered representative unless the concentration in the sample exceeds five times the detection limit

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FAX: (714) 891-5917

## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8932420-001/007  
Date Sampled: 17-NOV-1989  
20-NOV-1989  
Date Sample Rec'd: 20-NOV-1989  
Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO

## QA/QC Summary

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
1-DEC-1989	MERCURY (EPA 245.1)	L	100	41-137	10.	37
1-DEC-1989	ARSENIC (EPA 7061)	L	81	47-190	12.	30
28-NOV-1989	CHROMIUM, HEX/TTLC (EPA 7196)	L	105	60-130	2.	40
28-NOV-1989	CHROMIUM, HEXAVALENT (EPA 7196)	L	103	60-130	10.	40
1-DEC-1989	MERCURY (EPA 7471)	L	102	25-125	3.	51
4-DEC-1989	SELENIUM (EPA 7741)	L	68	30-103	2.	30
4-DEC-1989	THALLIUM (EPA 7840)	L	60	42-127	10.	39
28-NOV-1989	1,1-DICHLOROETHENE (EPA 8240)	L	89	54-134	6.	25
28-NOV-1989	TRICHLOROETHENE (EPA 8240)	L	89	67-124	2.	21
28-NOV-1989	BENZENE (EPA 8240)	L	102	62-126	4.	24
28-NOV-1989	TOLUENE (EPA 8240)	L	99	66-126	3.	22
28-NOV-1989	CHLOROBENZENE (EPA 8240)	L	98	67-124	2.	22

M = Matrix Spike

L = Laboratory Control Sample Spike

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● 1065

1974-3-84

2 of 5

**1974-3-84**

# CHAIN OF CUSTODY RECORD

932420

4 of 5

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO, CA</b>			ANALYSES <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">                     HIC 17 CAN METALS                      AL, Fe, Mn                      B240                 </div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">                     HOLD                 </div> </div>						
Project No. <b>9500-089</b>			Field Logbook No. /									
Sampler: (Signature) <b>Bill Luvier</b>			Chain of Custody Tape No. /									
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	REMARKS							
MW 4-5'	11-20-89			SOIL	X	X						
10'	{			}						X		
15'										X		
20'							X	X				
25'											X	
30'											X	
20xxx <del>111</del>					X	X				X		
40'										X		
Relinquished by: (Signature) <b>Bill Luvier</b>				Date	Time	Received by: (Signature) <b>Paul Alcantara</b>				Date	Time	
Relinquished by: (Signature) <b>Paul Alcantara</b>				Date	Time	Received by: (Signature) /				Date	Time	
Relinquished by: (Signature) /				Date	Time	Received for Laboratory: (Signature) <b>[Signature]</b>				Date	Time	
Sample Disposal Method:				Disposed of by: (Signature)				Date				
SAMPLE COLLECTOR <b>ENSR CONSULTING &amp; ENGINEERING 19782 MAC ARTHUR BLVD. #365 IRVINE, CA 92715</b>				ANALYTICAL LABORATORY <b>CRL</b>				<b>ENSR</b> 1 of 3				

# CHAIN OF CUSTODY RECORD

932420

5 of 5

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO, CA</b>			<div style="display: flex; justify-content: space-between;"> <div> ANALYSES  <i>Tric 17 CAN WEARS</i>  <i>Al, Fe, Mn</i>  <i>8240</i>    <i>Hold</i> </div> <div>REMARKS</div> </div>						
Project No. <b>9500 - 089</b>			Field Logbook No. <b>/</b>									
Sampler: (Signature) <i>Bill Krammer</i>			Chain of Custody Tape No. <b>/</b>									
Sample No. / Identification	Date	Time	Lab Sample Number	Type of Sample								
MW 4 - <del>11</del>	11-20-89			Soil								
50	)			)						X		
<del>11</del>												
60												
<del>11</del>												
70												X
<del>11</del>												
80											X	
Relinquished by: (Signature) <i>Wendy M. Schudel</i>				Date 11-20-89	Time 2:55 pm	Received by: (Signature) <i>P. Alcantara</i>				Date 11/29/89	Time 2:55 P.M.	
Relinquished by: (Signature) <i>P. Alcantara</i>				Date 11-30-89	Time 6:30 PM	Received by: (Signature) <i>[Signature]</i>				Date 11/20/89	Time 6:30 PM	
Relinquished by: (Signature) <i>[Signature]</i>				Date 	Time 	Received for Laboratory: (Signature) <i>[Signature]</i>				Date 	Time 	
Sample Disposal Method:				Disposed of by: (Signature) <i>[Signature]</i>						Date 	Time 	
SAMPLE COLLECTOR <b>ENSR CONSULTING &amp; ENGINEERING</b> 19702 MAC ARTHUR BLVD. #365 IRVINE, CA 92715				ANALYTICAL LABORATORY <b>CRL</b>						<b>ENSR</b>  <b>2 of 3</b>		

# CHAIN OF CUSTODY RECORD

932420

3 of 5

Client/Project Name <b>KRAUER</b>			Project Location <b>EL SEGUNDO, CA</b>			<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TIC 17 CAN METALS</div> <div>ANALYSES</div> </div>					
Project No. <b>9500-089</b>			Field Logbook No. <b>/</b>								
Sampler: (Signature) <b>Bill Krauer</b>			Chain of Custody Tape No. <b>/</b>								
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	REMARKS						
<del>MW 4-90'</del>	11-20-89			Soil							
MW 4-90'	"			"							X
Relinquished by: (Signature) <b>Bill Krauer</b>				Date <b>11-20-89</b>	Time	Received by: (Signature) <b>Phil C. Cautera</b>				Date <b>11/20/89</b>	Time <b>2:55 PM</b>
Relinquished by: (Signature) <b>Phil C. Cautera</b>				Date <b>11-20-89</b>	Time <b>6:34 PM</b>	Received by: (Signature)				Date	Time
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <b>[Signature]</b>				Date <b>11/20/89</b>	Time <b>6:34 PM</b>
Sample Disposal Method:				Disposed of by: (Signature) <b>[Signature]</b>						Date	Time
SAMPLE COLLECTOR <b>ENSR CONSULTING &amp; ENGINEERING</b> <b>19782 MACARTHUR BLVD. #365</b> <b>IRVINE, CA 92715</b>				ANALYTICAL LABORATORY <b>CRL</b>						<div style="text-align: center;"> <b>ENSR</b>              3 of 3           </div>	

## SECTION 6

**Enseco - CRL / South Coast**

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Ans'd .....

December 28, 1989

ENSR CONSTRUCTORS  
19782 MACARTHUR BLVD., STE. 365  
IRVINE, CA 92715-2417  
ATTN: MR. ERIK NELSON


Analysis No.: G-8932134-001/017  
Date Sampled: 16/17-NOV-1989  
Date Sample Rec'd: 17-NOV-1989  
Project: (9500-089) KRAMER - EL SEGUNDO

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8932134-001/017 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

Solid samples are reported on "as received" basis.

Reference #: 34Site Name: H. KRAMEREPA ID #: CAD008260267  
\_\_\_\_\_  
Reviewed  
\_\_\_\_\_  
Approved

The Report Cover Letter is an integral part of this report.

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**Laboratory Report****ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-001/005

Date Sampled: 16-NOV-1989

17-NOV-1989

Date Sample Rec'd: 17-NOV-1989

Date Analyzed: 7-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO

Sample ID	Aluminum/ STLC	Iron/STLC	Manganese/ STLC
	mg/L	mg/L	mg/L
	EPA 200.7	EPA 200.7	EPA 200.7
SB3-5'	189.	623.	44.8
SB3-15'	32.3	160.	47.1
SB3-30'	10.2	14.	5.2
SB4-10'	315.	903.	98.2
SB5-5'	281.	816.	101.
Blank	ND(0.5)	ND(0.5)	ND(0.05)

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 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-001/014

Date Sampled: 16-NOV-1989

17-NOV-1989

Date Sample Rec'd: 17-NOV-1989

Date Analyzed: 6-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO

Sample ID	Aluminum/ TTLC mg/kg EPA 6010	Iron/TTLC mg/kg EPA 6010	Manganese/ TTLC mg/kg EPA 6010
SB3-5'	10,600.	22,100.	1,430.
SB3-15'	2,910.	5,630.	1,110.
SB3-30'	2,120.	3,380.	78.7
SB4-10'	10,300.	19,000.	1,480.
SB5-5'	9,260.	16,800.	1,720.
SB3-20'	3,420.	6,010.	104.
SB4-15'	2,200.	4,260.	93.6
SB5-18'	6,560.	9,340.	85.4
MW5-5'	2,980.	7,140.	134.
MW5-20'	1,880.	3,200.	44.
HB4-1'	ND(9.8)	6,320.	263.
HB4-5'	1,780.	3,970.	150.
HB5-1'	3,020.	5,390.	169.
HB5-5'	1,590.	3,340.	55.6
Blank	ND(9.9)	ND(9.9)	ND(0.99)

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ENSR CONSTRUCTORS  
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 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-001  
 Date Sampled: 16-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 6-DEC-1989  
 1-DEC-1989  
 21-NOV-1989  
 5-DEC-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB3-5'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	5
Arsenic/TTLC (EPA 7061)	mg/kg	3.1	ND	0.2
Barium/TTLC (EPA 6010)	mg/kg	501.	ND	0.99
Beryllium/TTLC (EPA 6010)	mg/kg	106.	ND	0.2
Cadmium/TTLC (EPA 6010)	mg/kg	29.5	ND	0.5
Chromium, Total/TTLC (EPA 6010)	mg/kg	19.3	ND	0.99
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	17.	ND	0.99
Copper/TTLC (EPA 6010)	mg/kg	3,000.	ND	0.99
Lead/TTLC (EPA 6010)	mg/kg	2,450.	ND	5
Mercury/TTLC (EPA 7471)	mg/kg	0.36	ND	0.1
Molybdenum/TTLC (EPA 6010)	mg/kg	24.4	ND	2.
Nickel/TTLC (EPA 6010)	mg/kg	116.	ND	4.
Selenium/TTLC (EPA 270.3)	mg/kg	2.0	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	1.9	ND	0.99
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	17.5	ND	0.99
Zinc/TTLC (EPA 6010)	mg/kg	76,000.	ND	12.4

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 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-001  
 Date Sampled: 16-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 7-DEC-1989  
 21-NOV-1989  
 1-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB3-5'

Parameter	Units	Result	Blank	Detection Limit
Antimony, STLC (EPA 200.7)	mg/L	0.76	ND	0.25
Arsenic, STLC (EPA 206.3)	mg/L	2.4	ND	0.5
Barium, STLC (EPA 200.7)	mg/L	14.4	ND	0.05
Beryllium, STLC (EPA 200.7)	mg/L	3.9	ND	0.01
Cadmium, STLC (EPA 200.7)	mg/L	4.1	ND	0.025
Chromium, STLC (EPA 200.7)	mg/L	0.72	ND	0.05
Chromium, Hexavalent, STLC (EPA 7196)	mg/L	ND	ND	0.05
Cobalt, STLC (EPA 200.7)	mg/L	0.57	ND	0.05
Copper, STLC (EPA 200.7)	mg/L	101.	ND	0.05
Lead, STLC (EPA 200.7)	mg/L	259.	ND	0.25
Mercury, STLC (EPA 245.1)	mg/L	ND	ND	0.005
Molybdenum, STLC (EPA 200.7)	mg/L	0.84	ND	0.1
Nickel, STLC (EPA 200.7)	mg/L	2.4	ND	0.2
Selenium, STLC (EPA 270.3)	mg/L	2.1	ND	1.
Silver, STLC (EPA 200.7)	mg/L	ND	ND	0.05
Thallium, STLC (EPA 279.1)	mg/L	ND	ND	10.
Vanadium, STLC (EPA 200.7)	mg/L	0.26	ND	0.05
Zinc, STLC (EPA 200.7)	mg/L	6,830.	ND	5.

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**Laboratory Report**

ENSR CONSTRUCTORS  
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 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-002  
 Date Sampled: 16-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 6-DEC-1989  
 1-DEC-1989  
 21-NOV-1989  
 5-DEC-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB3-15'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	102.	ND	4.9
Arsenic/TTLC (EPA 7061)	mg/kg	1,000.	ND	100
Barium/TTLC (EPA 6010)	mg/kg	74.3	ND	0.97
Beryllium/TTLC (EPA 6010)	mg/kg	0.22	ND	0.19
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.49
Chromium, Total/TTLC (EPA 6010)	mg/kg	7.9	ND	0.97
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	10.6	ND	0.97
Copper/TTLC (EPA 6010)	mg/kg	22.	ND	0.97
Lead/TTLC (EPA 6010)	mg/kg	5.2	ND	4.9
Mercury/TTLC (EPA 7471)	mg/kg	0.03	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	1.9
Nickel/TTLC (EPA 6010)	mg/kg	4.6	ND	3.9
Selenium/TTLC (EPA 270.3)	mg/kg	0.9	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.97
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	13.8	ND	0.97
Zinc/TTLC (EPA 6010)	mg/kg	61.	ND	0.97

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 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-002  
 Date Sampled: 16-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 7-DEC-1989  
 21-NOV-1989  
 1-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB3-15'

Parameter	Units	Result	Blank	Detection Limit
Antimony, STLC (EPA 200.7)	mg/L	8.9	ND	0.25
Arsenic, STLC (EPA 206.3)	mg/L	152.	ND	0.5
Barium, STLC (EPA 200.7)	mg/L	4.0	ND	0.05
Beryllium, STLC (EPA 200.7)	mg/L	ND	ND	0.01
Cadmium, STLC (EPA 200.7)	mg/L	ND	ND	0.025
Chromium, STLC (EPA 200.7)	mg/L	0.23	ND	0.05
Chromium, Hexavalent, STLC (EPA 7196)	mg/L	ND	ND	0.05
Cobalt, STLC (EPA 200.7)	mg/L	0.61	ND	0.05
Copper, STLC (EPA 200.7)	mg/L	0.099	ND	0.05
Lead, STLC (EPA 200.7)	mg/L	ND	ND	0.25
Mercury, STLC (EPA 245.1)	mg/L	ND	ND	0.005
Molybdenum, STLC (EPA 200.7)	mg/L	ND	ND	0.1
Nickel, STLC (EPA 200.7)	mg/L	ND	ND	0.2
Selenium, STLC (EPA 270.3)	mg/L	ND	ND	1.
Silver, STLC (EPA 200.7)	mg/L	ND	ND	0.05
Thallium, STLC (EPA 279.1)	mg/L	ND	ND	10.
Vanadium, STLC (EPA 200.7)	mg/L	0.64	ND	0.05
Zinc, STLC (EPA 200.7)	mg/L	4.1	ND	0.05

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**Laboratory Report**

ENSR CONSTRUCTORS  
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 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-003  
 Date Sampled: 16-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 6-DEC-1989  
 1-DEC-1989  
 21-NOV-1989  
 5-DEC-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB3-30'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	5
Arsenic/TTLC (EPA 7061)	mg/kg	14.	ND	1.0
Barium/TTLC (EPA 6010)	mg/kg	23.1	ND	1.
Beryllium/TTLC (EPA 6010)	mg/kg	ND	ND	0.2
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.5
Chromium, Total/TTLC (EPA 6010)	mg/kg	4.7	ND	1
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	1.4	ND	1
Copper/TTLC (EPA 6010)	mg/kg	13.8	ND	1
Lead/TTLC (EPA 6010)	mg/kg	5.6	ND	5
Mercury/TTLC (EPA 7471)	mg/kg	0.03	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	2
Nickel/TTLC (EPA 6010)	mg/kg	4.6	ND	4.
Selenium/TTLC (EPA 270.3)	mg/kg	0.1	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	1
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	6.3	ND	1
Zinc/TTLC (EPA 6010)	mg/kg	56.8	ND	1

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 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-003  
 Date Sampled: 16-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 7-DEC-1989  
 21-NOV-1989  
 1-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB3-30'

Parameter	Units	Result	Blank	Detection Limit
Antimony, STLC (EPA 200.7)	mg/L	0.9	ND	0.25
Arsenic, STLC (EPA 206.3)	mg/L	ND	ND	0.5
Barium, STLC (EPA 200.7)	mg/L	2.3	ND	0.05
Beryllium, STLC (EPA 200.7)	mg/L	ND	ND	0.01
Cadmium, STLC (EPA 200.7)	mg/L	ND	ND	0.025
Chromium, STLC (EPA 200.7)	mg/L	0.1	ND	0.05
Chromium, Hexavalent, STLC (EPA 7196)	mg/L	ND	ND	0.05
Cobalt, STLC (EPA 200.7)	mg/L	0.09	ND	0.05
Copper, STLC (EPA 200.7)	mg/L	0.73	ND	0.05
Lead, STLC (EPA 200.7)	mg/L	0.63	ND	0.25
Mercury, STLC (EPA 245.1)	mg/L	ND	ND	0.005
Molybdenum, STLC (EPA 200.7)	mg/L	ND	ND	0.1
Nickel, STLC (EPA 200.7)	mg/L	ND	ND	0.2
Selenium, STLC (EPA 270.3)	mg/L	ND	ND	1.
Silver, STLC (EPA 200.7)	mg/L	ND	ND	0.05
Thallium, STLC (EPA 279.1)	mg/L	ND	ND	10.
Vanadium, STLC (EPA 200.7)	mg/L	0.15	ND	0.05
Zinc, STLC (EPA 200.7)	mg/L	9.2	ND	0.05

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ENSR CONSTRUCTORS  
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 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-004  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 6-DEC-1989  
 1-DEC-1989  
 21-NOV-1989  
 5-DEC-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB4-10'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	4.9
Arsenic/TTLC (EPA 7061)	mg/kg	5.1	ND	0.4
Barium/TTLC (EPA 6010)	mg/kg	155.	ND	0.98
Beryllium/TTLC (EPA 6010)	mg/kg	53.6	ND	0.2
Cadmium/TTLC (EPA 6010)	mg/kg	6.5	ND	0.49
Chromium, Total/TTLC (EPA 6010)	mg/kg	74.6	ND	0.98
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	13.1	ND	0.98
Copper/TTLC (EPA 6010)	mg/kg	0.98	ND	0.05
Lead/TTLC (EPA 6010)	mg/kg	1,310.	ND	4.9
Mercury/TTLC (EPA 7471)	mg/kg	0.09	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	15.9	ND	2
Nickel/TTLC (EPA 6010)	mg/kg	120.	ND	3.9
Selenium/TTLC (EPA 270.3)	mg/kg	1.3	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	1.8	ND	0.98
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	15.2	ND	0.98
Zinc/TTLC (EPA 6010)	mg/kg	39,500.	ND	12.2

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 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-004  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 7-DEC-1989  
 21-NOV-1989  
 1-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB4-10'

Parameter	Units	Result	Blank	Detection Limit
Antimony, STLC (EPA 200.7)	mg/L	1.3	ND	0.25
Arsenic, STLC (EPA 206.3)	mg/L	1.5	ND	0.5
Barium, STLC (EPA 200.7)	mg/L	4.9	ND	0.05
Beryllium, STLC (EPA 200.7)	mg/L	2.7	ND	0.01
Cadmium, STLC (EPA 200.7)	mg/L	0.72	ND	0.025
Chromium, STLC (EPA 200.7)	mg/L	1.7	ND	0.05
Chromium, Hexavalent, STLC (EPA 7196)	mg/L	ND	ND	0.05
Cobalt, STLC (EPA 200.7)	mg/L	0.05	ND	0.05
Copper, STLC (EPA 200.7)	mg/L	142.	ND	0.05
Lead, STLC (EPA 200.7)	mg/L	53.8	ND	0.25
Mercury, STLC (EPA 245.1)	mg/L	ND	ND	0.005
Molybdenum, STLC (EPA 200.7)	mg/L	1.3	ND	0.1
Nickel, STLC (EPA 200.7)	mg/L	2.9	ND	0.2
Selenium, STLC (EPA 270.3)	mg/L	2.7	ND	1.
Silver, STLC (EPA 200.7)	mg/L	ND	ND	0.05
Thallium, STLC (EPA 279.1)	mg/L	ND	ND	10
Vanadium, STLC (EPA 200.7)	mg/L	0.44	ND	0.05
Zinc, STLC (EPA 200.7)	mg/L	2,740.	ND	5

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-005  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 6-DEC-1989  
 1-DEC-1989  
 21-NOV-1989  
 5-DEC-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB5-5'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	4.9
Arsenic/TTLC (EPA 7061)	mg/kg	2.8	ND	0.2
Barium/TTLC (EPA 6010)	mg/kg	129.	ND	0.98
Beryllium/TTLC (EPA 6010)	mg/kg	49.	ND	0.2
Cadmium/TTLC (EPA 6010)	mg/kg	5.4	ND	0.49
Chromium, Total/TTLC (EPA 6010)	mg/kg	19.5	ND	0.98
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	13.2	ND	0.98
Copper/TTLC (EPA 6010)	mg/kg	4,190.	ND	0.98
Lead/TTLC (EPA 6010)	mg/kg	1,100.	ND	4.9
Mercury/TTLC (EPA 7471)	mg/kg	0.09	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	18.3	ND	2.
Nickel/TTLC (EPA 6010)	mg/kg	116.	ND	3.9
Selenium/TTLC (EPA 270.3)	mg/kg	1.0	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	3.3	ND	0.98
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	13.5	ND	0.98
Zinc/TTLC (EPA 6010)	mg/kg	38,200.	ND	12.3

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-005  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 7-DEC-1989  
 21-NOV-1989  
 1-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB5-5'

Parameter	Units	Result	Blank	Detection Limit
Antimony, STLC (EPA 200.7)	mg/L	3.3	ND	0.25
Arsenic, STLC (EPA 206.3)	mg/L	1.5	ND	0.5
Barium, STLC (EPA 200.7)	mg/L	4.	ND	0.05
Beryllium, STLC (EPA 200.7)	mg/L	2.4	ND	0.01
Cadmium, STLC (EPA 200.7)	mg/L	1.7	ND	0.025
Chromium, STLC (EPA 200.7)	mg/L	1.1	ND	0.05
Chromium, Hexavalent, STLC (EPA 7196)	mg/L	ND	ND	0.05
Cobalt, STLC (EPA 200.7)	mg/L	0.68	ND	0.05
Copper, STLC (EPA 200.7)	mg/L	166.	ND	0.05
Lead, STLC (EPA 200.7)	mg/L	97.4	ND	0.25
Mercury, STLC (EPA 245.1)	mg/L	ND	ND	0.005
Molybdenum, STLC (EPA 200.7)	mg/L	1.5	ND	0.1
Nickel, STLC (EPA 200.7)	mg/L	3.7	ND	0.2
Selenium, STLC (EPA 270.3)	mg/L	2.2	ND	1
Silver, STLC (EPA 200.7)	mg/L	ND	ND	0.05
Thallium, STLC (EPA 279.1)	mg/L	ND	ND	10.
Vanadium, STLC (EPA 200.7)	mg/L	0.42	ND	0.05
Zinc, STLC (EPA 200.7)	mg/L	4,040.	ND	5

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**Laboratory Report**

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 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-006  
 Date Sampled: 16-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 6-DEC-1989  
 1-DEC-1989  
 21-NOV-1989  
 5-DEC-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB3-20'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	4.9
Arsenic/TTLC (EPA 7061)	mg/kg	2,800.	ND	200
Barium/TTLC (EPA 6010)	mg/kg	25.6	ND	0.98
Beryllium/TTLC (EPA 6010)	mg/kg	ND	ND	0.2
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.49
Chromium, Total/TTLC (EPA 6010)	mg/kg	6.7	ND	0.98
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	2.8	ND	0.98
Copper/TTLC (EPA 6010)	mg/kg	36.2	ND	0.98
Lead/TTLC (EPA 6010)	mg/kg	5.5	ND	4.9
Mercury/TTLC (EPA 7471)	mg/kg	ND	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	2.
Nickel/TTLC (EPA 6010)	mg/kg	6.5	ND	3.9
Selenium/TTLC (EPA 270.3)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.98
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	12.9	ND	0.98
Zinc/TTLC (EPA 6010)	mg/kg	75.6	ND	0.98

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 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-007  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 6-DEC-1989  
 1-DEC-1989  
 21-NOV-1989  
 5-DEC-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB4-15'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	196.	ND	4.9
Arsenic/TTLC (EPA 7061)	mg/kg	11.	ND	1.0
Barium/TTLC (EPA 6010)	mg/kg	36.7	ND	0.98
Beryllium/TTLC (EPA 6010)	mg/kg	ND	ND	0.050.
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.49
Chromium, Total/TTLC (EPA 6010)	mg/kg	4.8	ND	0.98
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	1.7	ND	0.98
Copper/TTLC (EPA 6010)	mg/kg	21.4	ND	0.98
Lead/TTLC (EPA 6010)	mg/kg	ND	ND	4.9
Mercury/TTLC (EPA 7471)	mg/kg	0.04	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	2.
Nickel/TTLC (EPA 6010)	mg/kg	ND	ND	3.9
Selenium/TTLC (EPA 270.3)	mg/kg	17.	ND	1.0
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.98
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	7.1	ND	0.98
Zinc/TTLC (EPA 6010)	mg/kg	36.9	ND	0.98

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Analysis No.: G-8932134-008  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 6-DEC-1989  
 1-DEC-1989  
 21-NOV-1989  
 5-DEC-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB5-18'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	4.9
Arsenic/TTLC (EPA 7061)	mg/kg	1,500.	ND	100
Barium/TTLC (EPA 6010)	mg/kg	41.3	ND	0.98
Beryllium/TTLC (EPA 6010)	mg/kg	0.2	ND	0.2
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.49
Chromium, Total/TTLC (EPA 6010)	mg/kg	12.	ND	0.98
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	2.8	ND	0.98
Copper/TTLC (EPA 6010)	mg/kg	19.9	ND	0.98
Lead/TTLC (EPA 6010)	mg/kg	5.	ND	4.9
Mercury/TTLC (EPA 7471)	mg/kg	0.02	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	2
Nickel/TTLC (EPA 6010)	mg/kg	6.	ND	3.9
Selenium/TTLC (EPA 270.3)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.98
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	15.7	ND	0.98
Zinc/TTLC (EPA 6010)	mg/kg	31.1	ND	0.98

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Analysis No.: G-8932134-009  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 6-DEC-1989  
 1-DEC-1989  
 21-NOV-1989  
 5-DEC-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: MW5-5'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	1,780.	ND	4.9
Arsenic/TTLC (EPA 7061)	mg/kg	1,300.	ND	100
Barium/TTLC (EPA 6010)	mg/kg	52.6	ND	0.98
Beryllium/TTLC (EPA 6010)	mg/kg	ND	ND	0.2
Cadmium/TTLC (EPA 6010)	mg/kg	0.78	ND	0.49
Chromium, Total/TTLC (EPA 6010)	mg/kg	7.3	ND	0.98
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	3.5	ND	0.98
Copper/TTLC (EPA 6010)	mg/kg	45.7	ND	0.98
Lead/TTLC (EPA 6010)	mg/kg	13.1	ND	4.9
Mercury/TTLC (EPA 7471)	mg/kg	5.8	ND	1.0
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	2.
Nickel/TTLC (EPA 6010)	mg/kg	9.6	ND	3.9
Selenium/TTLC (EPA 270.3)	mg/kg	300.	ND	20
Silver/TTLC (EPA 6010)	mg/kg	1.	ND	0.98
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	12.5	ND	0.98
Zinc/TTLC (EPA 6010)	mg/kg	76.5	ND	0.98

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## Laboratory Report

ENSR CONSTRUCTORS  
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ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-010  
Date Sampled: 17-NOV-1989  
Date Sample Rec'd: 17-NOV-1989  
Date Analyzed: 6-DEC-1989  
1-DEC-1989  
21-NOV-1989  
5-DEC-1989  
4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: MW5-20'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	5.
Arsenic/TTLC (EPA 7061)	mg/kg	45.	ND	10
Barium/TTLC (EPA 6010)	mg/kg	11.1	ND	0.99
Beryllium/TTLC (EPA 6010)	mg/kg	ND	ND	0.2
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.5
Chromium, Total/TTLC (EPA 6010)	mg/kg	4.3	ND	0.99
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	1.5	ND	0.99
Copper/TTLC (EPA 6010)	mg/kg	9.7	ND	0.99
Lead/TTLC (EPA 6010)	mg/kg	ND	ND	5.
Mercury/TTLC (EPA 7471)	mg/kg	ND	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	2.
Nickel/TTLC (EPA 6010)	mg/kg	ND	ND	4
Selenium/TTLC (EPA 270.3)	mg/kg	ND	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.99
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	7.1	ND	0.99
Zinc/TTLC (EPA 6010)	mg/kg	14.1	ND	0.99

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 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-011  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 6-DEC-1989  
 1-DEC-1989  
 21-NOV-1989  
 5-DEC-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: HB4-1'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	17.1	ND	4.9
Arsenic/TTLC (EPA 7061)	mg/kg	24.	ND	2.0
Barium/TTLC (EPA 6010)	mg/kg	63.1	ND	0.98
Beryllium/TTLC (EPA 6010)	mg/kg	1.	ND	0.2
Cadmium/TTLC (EPA 6010)	mg/kg	0.8	ND	0.49
Chromium, Total/TTLC (EPA 6010)	mg/kg	10.6	ND	0.98
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	5.2	ND	0.98
Copper/TTLC (EPA 6010)	mg/kg	613.	ND	0.98
Lead/TTLC (EPA 6010)	mg/kg	77.7	ND	4.9
Mercury/TTLC (EPA 7471)	mg/kg	0.07	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	2.
Nickel/TTLC (EPA 6010)	mg/kg	20.4	ND	3.9
Selenium/TTLC (EPA 270.3)	mg/kg	1.6	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.98
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	15.6	ND	0.98
Zinc/TTLC (EPA 6010)	mg/kg	847.	ND	0.98

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 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-012  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 6-DEC-1989  
 1-DEC-1989  
 21-NOV-1989  
 5-DEC-1989  
 4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: HB4-5'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	30.8	ND	5
Arsenic/TTLC (EPA 7061)	mg/kg	480.	ND	50
Barium/TTLC (EPA 6010)	mg/kg	34.5	ND	0.99
Beryllium/TTLC (EPA 6010)	mg/kg	ND	ND	0.2
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.5
Chromium, Total/TTLC (EPA 6010)	mg/kg	4.1	ND	0.99
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	2.1	ND	0.99
Copper/TTLC (EPA 6010)	mg/kg	10.7	ND	0.99
Lead/TTLC (EPA 6010)	mg/kg	ND	ND	5.
Mercury/TTLC (EPA 7471)	mg/kg	0.04	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	2.
Nickel/TTLC (EPA 6010)	mg/kg	ND	ND	4.
Selenium/TTLC (EPA 270.3)	mg/kg	0.9	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.99
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	8.8	ND	0.99
Zinc/TTLC (EPA 6010)	mg/kg	19.	ND	0.99

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## Laboratory Report

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ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-013  
Date Sampled: 17-NOV-1989  
Date Sample Rec'd: 17-NOV-1989  
Date Analyzed: 6-DEC-1989  
1-DEC-1989  
21-NOV-1989  
5-DEC-1989  
4-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: HB5-1'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	334.	ND	5
Arsenic/TTLC (EPA 7061)	mg/kg	79.	ND	10
Barium/TTLC (EPA 6010)	mg/kg	58.8	ND	0.99
Beryllium/TTLC (EPA 6010)	mg/kg	0.84	ND	0.2
Cadmium/TTLC (EPA 6010)	mg/kg	2.1	ND	0.5
Chromium, Total/TTLC (EPA 6010)	mg/kg	36.	ND	0.99
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	3.6	ND	0.99
Copper/TTLC (EPA 6010)	mg/kg	196.	ND	0.99
Lead/TTLC (EPA 6010)	mg/kg	118.	ND	5.
Mercury/TTLC (EPA 7471)	mg/kg	0.07	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	3.1	ND	2.
Nickel/TTLC (EPA 6010)	mg/kg	7.5	ND	4
Selenium/TTLC (EPA 270.3)	mg/kg	5.6	ND	0.4
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.99
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	10.8	ND	0.99
Zinc/TTLC (EPA 6010)	mg/kg	1,020.	ND	0.99

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 ATTN: Mr. Erik Nelson

 Analysis No.: G-8932134-014  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 6-DEC-1989  
 1-DEC-1989  
 21-NOV-1989  
 5-DEC-1989  
 4-DEC-1989

Sample Type: SOLID

 Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: HB5-5'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	87.8	ND	4.8
Arsenic/TTLC (EPA 7061)	mg/kg	20.	ND	2.0
Barium/TTLC (EPA 6010)	mg/kg	22.5	ND	0.96
Beryllium/TTLC (EPA 6010)	mg/kg	ND	ND	0.19
Cadmium/TTLC (EPA 6010)	mg/kg	ND	ND	0.48
Chromium, Total/TTLC (EPA 6010)	mg/kg	4.1	ND	0.96
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	2.3	ND	0.96
Copper/TTLC (EPA 6010)	mg/kg	9.9	ND	0.96
Lead/TTLC (EPA 6010)	mg/kg	ND	ND	4.8
Mercury/TTLC (EPA 7471)	mg/kg	0.11	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	ND	ND	1.9
Nickel/TTLC (EPA 6010)	mg/kg	3.9	ND	3.8
Selenium/TTLC (EPA 270.3)	mg/kg	120.	ND	10.0
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.96
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1
Vanadium/TTLC (EPA 6010)	mg/kg	6.3	ND	0.96
Zinc/TTLC (EPA 6010)	mg/kg	46.6	ND	0.96

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**Enseco - CRL**

7440 Lincoln Way • Garden Grove, CA 92641  
 (714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL  
 FAX: (714) 891-5917

**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-015  
 Date Sampled: 16-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 27-NOV-1989  
 Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB3-25'

**Purgeable Organics, EPA 8240**

Units: ug/kg

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Acetone	17.*	ND	10
Carbon Disulfide	ND	ND	5
Trichlorofluoromethane	ND	ND	5
1,1-Dichloroethene	ND	ND	5
1,1-Dichloroethane	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	ND	ND	5
1,2-Dichloroethane	ND	ND	5
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
Trichloroethene	ND	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	ND	ND	5
cis-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylenes, Total	ND	ND	5

\* The analytical results for Acetone should not be considered representative unless the concentration in the sample exceeds five times the detection limit

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**Laboratory Report**

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 ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-016  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 27-NOV-1989  
 Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB4-30'

 -----  
**Purgeable Organics, EPA 8240**

Units: ug/kg

Parameter	Result	Blank	Detection Limit
-----	-----	-----	-----
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Acetone	30.*	ND	10
Carbon Disulfide	ND	ND	5
Trichlorofluoromethane	ND	ND	5
1,1-Dichloroethene	ND	ND	5
1,1-Dichloroethane	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	ND	ND	5
1,2-Dichloroethane	ND	ND	5
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
Trichloroethene	ND	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	ND	ND	5
cis-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylenes, Total	ND	ND	5

\* The analytical results for Acetone should not be considered representative unless the concentration in the sample exceeds five times the detection limit

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 FAX: (714) 891-5917

**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-017  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 28-NOV-1989  
 Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB5-10'

**Purgeable Organics, EPA 8240**

Units: ug/kg

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Acetone	21.*	ND	10
Carbon Disulfide	ND	ND	5
Trichlorofluoromethane	ND	ND	5
1,1-Dichloroethene	ND	ND	5
1,1-Dichloroethane	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	ND	ND	5
1,2-Dichloroethane	ND	ND	5
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
Trichloroethene	ND	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	ND	ND	5
cis-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylenes, Total	ND	ND	5

\* The analytical results for Acetone should not be considered representative unless the concentration in the sample exceeds five times the detection limit

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 FAX: (714) 891-5917

**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-001/017  
 Date Sampled: 16-NOV-1989  
 17-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO

**QA/QC Summary**

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
1-DEC-1989	MERCURY (EPA 245.1)	L	100	41-137	10.	37
4-DEC-1989	SELENIUM (EPA 270.3)	L	108	41-137	0.	25
1-DEC-1989	ARSENIC (EPA 7061)	L	70	47-190	7.	30
21-NOV-1989	CHROMIUM, HEX/TTLC (EPA 7196)	L	97	60-130	6.	40
21-NOV-1989	CHROMIUM, HEXAVALENT (EPA 7196)	L	99	60-130	2.	40
5-DEC-1989	MERCURY (EPA 7471)	L	105	25-125	5.	51
4-DEC-1989	THALLIUM (EPA 7840)	L	62	42-127	10.	39
28-NOV-1989	1,1-DICHLOROETHENE (EPA 8240)	L	89	54-134	6.	25
28-NOV-1989	TRICHLOROETHENE (EPA 8240)	L	89	67-124	2.	21
28-NOV-1989	BENZENE (EPA 8240)	L	102	62-126	4.	24
28-NOV-1989	TOLUENE (EPA 8240)	L	99	66-126	3.	22
28-NOV-1989	CHLOROBENZENE (EPA 8240)	L	98	67-124	2.	22

M = Matrix Spike

L = Laboratory Control Sample Spike

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**Laboratory Report**

ENSR CONSTRUCTORS  
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 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-015  
 Date Sampled: 16-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 27-NOV-1989  
 Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB3-25'

**Purgeable Organics, EPA 8240**

Units: ug/kg

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Acetone	17.*	ND	10
Carbon Disulfide	ND	ND	5
Trichlorofluoromethane	ND	ND	5
1,1-Dichloroethene	ND	ND	5
1,1-Dichloroethane	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	ND	ND	5
1,2-Dichloroethane	ND	ND	5
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
Trichloroethene	ND	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	ND	ND	5
cis-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylenes, Total	ND	ND	5

\* The analytical results for Acetone should not be considered representative unless the concentration in the sample exceeds five times the detection limit

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**Laboratory Report**

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 ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-016  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 27-NOV-1989  
 Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB4-30'

-----

**Purgeable Organics, EPA 8240**

Units: ug/kg

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Acetone	30.*	ND	10
Carbon Disulfide	ND	ND	5
Trichlorofluoromethane	ND	ND	5
1,1-Dichloroethene	ND	ND	5
1,1-Dichloroethane	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	ND	ND	5
1,2-Dichloroethane	ND	ND	5
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
Trichloroethene	ND	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	ND	ND	5
cis-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylenes, Total	ND	ND	5

\* The analytical results for Acetone should not be considered representative unless the concentration in the sample exceeds five times the detection limit

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**Laboratory Report**

ENSR CONSTRUCTORS  
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 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932134-017  
 Date Sampled: 17-NOV-1989  
 Date Sample Rec'd: 17-NOV-1989  
 Date Analyzed: 28-NOV-1989  
 Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB5-10'

**Purgeable Organics, EPA 8240**

Units: ug/kg

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Acetone	21.*	ND	10
Carbon Disulfide	ND	ND	5
Trichlorofluoromethane	ND	ND	5
1,1-Dichloroethene	ND	ND	5
1,1-Dichloroethane	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	ND	ND	5
1,2-Dichloroethane	ND	ND	5
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
Trichloroethene	ND	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	ND	ND	5
cis-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylenes, Total	ND	ND	5

\* The analytical results for Acetone should not be considered representative unless the concentration in the sample exceeds five times the detection limit


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# CHAIN OF CUSTODY RECORD

932134

pg. 1 of 2

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO, CA</b>			ANALYSES					
Project No. <b>9500-089</b>			Field Logbook No. /			<div style="display: flex; justify-content: space-around; transform: rotate(-45deg);"> <div>STL &amp; TTL 17 CANE METALS</div> <div>17 CANE METALS</div> <div>AL, Fe, Mn B240</div> <div>HOLD</div> </div>					
Sampler: (Signature) <b>Bill Leuer</b>			Chain of Custody Tape No. /								
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	REMARKS						
SB3-5'	11-16-89			SOIL	X					X	
-10'	)			)	X					X	
-15'										X	
-16.5										X	
-18.0										X	
-20.0							X				
-25								X			
-30					X						
Relinquished by: (Signature) <b>Bill Leuer</b>				Date <b>11-17-89</b>	Time	Received by: (Signature) <b>Paul A. Cantana</b>				Date <b>11/17/89</b>	Time <b>2:50 PM</b>
Relinquished by: (Signature) <b>Paul A. Cantana</b>				Date <b>11-17-89</b>	Time <b>6:45 PM</b>	Received by: (Signature)				Date	Time
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <b>only</b>				Date <b>11-17-89</b>	Time <b>6:45 pm</b>
Sample Disposal Method:				Disposed of by: (Signature) <b>only</b>				Date			
SAMPLE COLLECTOR <b>ENSR Corporation 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321</b>				ANALYTICAL LABORATORY <b>CRL</b>				<div style="text-align: center;">  </div>			
								1 of 2			

# CHAIN OF CUSTODY RECORD

932134


pg. 4 of 7

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO, CA</b>			<div style="text-align: center;">ANALYSES</div> <div style="display: flex; justify-content: space-around; transform: rotate(-45deg);"> <div style="text-align: center;">TLC + STC 17 CAN METALS</div> <div style="text-align: center;">TLC 17 CAN METALS</div> <div style="text-align: center;">AL, Fe, Mn B240</div> <div style="text-align: center;">HARD</div> </div>					
Project No. <b>9500-089</b>			Field Logbook No. /								
Sampler: (Signature) <i>Ben River</i>			Chain of Custody Tape No. /								
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	REMARKS						
SB3- 35'	11-16-89			Soil							X
- 40'	)			S							X
- 45'											X
Relinquished by: (Signature) <i>Ben River</i>				Date	Time	Received by: (Signature) <i>Paul D. Cantan</i>				Date	Time
Relinquished by: (Signature) <i>Paul D. Cantan</i>				Date	Time	Received by: (Signature)				Date	Time
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <i>[Signature]</i>				Date	Time
Sample Disposal Method:				Disposed of by: (Signature) <i>[Signature]</i>						Date	Time
SAMPLE COLLECTOR  ENSR Corporation 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321				ANALYTICAL LABORATORY  CRL						<div style="text-align: center; font-weight: bold; font-size: 1.5em;">ENSR</div>	
2 of 2											

# CHAIN OF CUSTODY RECORD

932134

pg. 3

Client/Project Name <b>KRAWER</b>			Project Location <b>EL SEGUNDO, CA</b>			ANALYSES						REMARKS
Project No. <b>9500-089</b>			Field Logbook No. /			<div style="display: flex; flex-direction: column; align-items: center;"> <div>TTL &amp; STL</div> <div>17 CANAL METALS</div> <div>TTL 17 CANAL METALS</div> <div>AI, FC, Mn</div> <div>B240</div> <div>HOLD</div> </div>						
Sampler: (Signature) <b>Bin Ruen</b>			Chain of Custody Tape No. /									
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample								
SB4 - 5'	11-17-89			Soil								
10'	}			}	X		X					
15						X	X					
16										X		
20										X		
25										X		
30									X			
35									X			
Relinquished by: (Signature) <b>Bin Ruen</b>				Date <b>11-17-89</b>	Time	Received by: (Signature) <b>Paul A. Cantalan</b>				Date <b>11/17/89</b>	Time <b>2:50 PM</b>	
Relinquished by: (Signature) <b>Paul A. Cantalan</b>				Date <b>11-17-89</b>	Time <b>6:45 PM</b>	Received by: (Signature)				Date	Time	
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <b>W. J.</b>				Date <b>11-17-89</b>	Time <b>6:45 PM</b>	
Sample Disposal Method:				Disposed of by: (Signature) <b>W. J.</b>						Date	Time	
SAMPLE COLLECTOR ENSR Corporation 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321				ANALYTICAL LABORATORY <b>CRL</b>						<div style="text-align: center;">  </div>		
1 of 2												

# CHAIN OF CUSTODY RECORD

932134

pg. 4 of 7

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO, CA</b>			ANALYSES							
Project No. <b>9500-089</b>			Field Logbook No. <b>/</b>			<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">STC &amp; TCC 17 CANC METALS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TLC 17 CANC METALS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">AL, FC, Mn 8240</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TO BE DETERMINED</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">HOLD</div> </div>							
Sampler: (Signature) <b>Bin Linn</b>			Chain of Custody Tape No. <b>/</b>										
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	REMARKS								
<b>SB4 - 40</b>	<b>11-17-89</b>			<b>Soil</b>									
<b>45</b>				<b>"</b>									
<b>SB4 - 0</b>	<b>11-17-89</b>												
Relinquished by: (Signature) <b>Bin Linn</b>					Date <b>11-17-89</b>	Time	Received by: (Signature) <b>Philo Alcantara</b>					Date <b>11/17/89</b>	Time <b>1:51 PM</b>
Relinquished by: (Signature) <b>Philo Alcantara</b>					Date <b>11-17-89</b>	Time <b>6:45 PM</b>	Received by: (Signature)					Date	Time
Relinquished by: (Signature)					Date	Time	Received for Laboratory: (Signature) <b>[Signature]</b>					Date <b>11-17-89</b>	Time <b>6:45 pm</b>
Sample Disposal Method:					Disposed of by: (Signature) <b>[Signature]</b>					Date	Time		
SAMPLE COLLECTOR <b>ENSR CORP. 19782 MacArthur Blvd., Ste 365 Irvine, CA 92715 (714) 476-0321</b>					ANALYTICAL LABORATORY <b>CRL</b>					<b>ENSR</b> <div style="text-align: center;">2 of 2</div>			



# CHAIN OF CUSTODY RECORD

932134

Rg-5 7

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO, CA</b>			<div style="text-align: center;">ANALYSES</div> <div style="display: flex; justify-content: space-around; transform: rotate(-45deg);"> <div>5TLC &amp; 17C 17 CAN METALS</div> <div>17C 17 CAN METALS</div> <div>AI, Fe, Mn Q240</div> <div>HOLD</div> </div>					
Project No. <b>9500-089</b>			Field Logbook No. /								
Sampler: (Signature) <b>Ben Ruver</b>			Chain of Custody Tape No. /								
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	5TLC & 17C 17 CAN METALS	17C 17 CAN METALS	AI, Fe, Mn Q240	HOLD	REMARKS		
SB5 - 5'	11-17-89			Soil	X	X					
10'	}			}			X				
15'									X		
16'									X		
18'						X	X				
20'											
Relinquished by: (Signature) <b>Ben Ruver</b>				Date <b>11-17-89</b>	Time	Received by: (Signature) <b>Paul Alcantara</b>			Date <b>11/17/89</b>	Time <b>1:52 PM</b>	
Relinquished by: (Signature) <b>Paul Alcantara</b>				Date <b>11-17-89</b>	Time <b>6:45 PM</b>	Received by: (Signature)			Date	Time	
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <b>mg</b>			Date <b>11-17-89</b>	Time <b>6:45 pm</b>	
Sample Disposal Method:				Disposed of by: (Signature) <b>mg</b>					Date	Time	
SAMPLE COLLECTOR ENSR Corporation 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321				ANALYTICAL LABORATORY <b>CRL</b>					<div style="text-align: center;"><b>ENSR</b></div> <div style="text-align: center;">1 of 7</div>		

## CHAIN OF CUSTODY RECORD

932134

Page 6 of 7

Client/Project Name <b>9500-089 Kramer</b>			Project Location <b>E/Segundo</b>			ANALYSES					
Project No. <b>9500-089</b>			Field Logbook No.						TLC 17 CAM METALS AL, Fe, Mn 8240 HOLD		
Sampler: (Signature) <b>Christian Estutera</b>			Chain of Custody Tape No.								
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	REMARKS						
MW5-5	11/17				X	X					
MW5-10										X	
MW5-15										X	
MW5-20					X	X					
MW5-25A										X	
MW5-25A										X	
MW5-30										X	
MW5-40										X	
Relinquished by: (Signature) <b>Christian Estutera</b>				Date	Time	Received by: (Signature) <b>Paul A. Callahan</b>				Date	Time
Relinquished by: (Signature) <b>Paul A. Callahan</b>				Date	Time	Received by: (Signature)				Date	Time
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <b>[Signature]</b>				Date	Time
Sample Disposal Method:				Disposed of by: (Signature) <b>[Signature]</b>						Date	Time
SAMPLE COLLECTOR				ANALYTICAL LABORATORY						<b>ENSR</b> 1/2	
ENSR CORP. 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321											

# CHAIN OF CUSTODY RECORD

9321.34

70 7 of 7

Client/Project Name <b>KRAMER</b>			Project Location <b>El Segundo</b>			ANALYSES <div style="display: flex; justify-content: space-around; font-size: 0.8em;"> <span>TTC 17 Can Metals</span> <span>Al Fe Mn</span> <span>Hold</span> </div>					
Project No. <b>9500-089</b>			Field Logbook No. _____								
Sampler: (Signature) <i>Christian Osterman</i>			Chain of Custody Tape No. _____								
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	REMARKS						
MUS-50	11/17										
MUS-60	)										
MUS-70											
MUS-80											
HB4-1	11/17										
HB4-5	)										
HB5-1											
HB5-5											
Relinquished by: (Signature) <i>Christian Osterman</i>				Date	Time	Received by: (Signature) <i>Daniel Cautera</i>				Date	Time
Relinquished by: (Signature) <i>Daniel Cautera</i>				Date	Time	Received by: (Signature)				Date	Time
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <i>[Signature]</i>				Date	Time
Sample Disposal Method:				Disposed of by: (Signature) <i>[Signature]</i>						Date	Time
SAMPLE COLLECTOR ENSR CORP. 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321				ANALYTICAL LABORATORY						ENSR	
										2/2	

**SECTION 7**

**Enseco - CRL / South Coast**

7440 Lincoln Way • Garden Grove, CA 92641  
(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL  
FAX: (714) 891-5917

December 20, 1989

ENSR CONSTRUCTORS  
19782 MacARTHUR BLVD., STE 365  
IRVINE, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8932628-001/005  
Date Sampled: 22-NOV-1989  
Date Sample Rec'd: 22-NOV-1989  
Project: (9500-089) KRAMER-EL SEGUNDO

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8932628-001/005 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached. Sample seals were intact.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

Solid samples are reported on "as received" basis.

Preliminary data were provided on December 19, 1989 at 9:35 A.M.

  
Reviewed

  
Approved

The Report Cover Letter is an integral part of this report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

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 FAX: (714) 891-5917

**Laboratory Report**

-----  
 ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932628-001  
 Date Sampled: 22-NOV-1989  
 Date Sample Rec'd: 22-NOV-1989  
 Date Analyzed: 15-DEC-1989  
 8-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB10-10'

Parameter	Units	Result	Blank	Detection Limit
Aluminum/STLC (EPA 200.7)	mg/L	380.	ND	10
Iron/STLC (EPA 200.7)	mg/L	1,100.	ND	5
Manganese/STLC (EPA 200.7)	mg/L	150.	ND	0.2
Aluminum/TTLC (EPA 6010)	mg/kg	6,000.	ND	60
Iron/TTLC (EPA 6010)	mg/kg	9,800.	ND	200
Manganese/TTLC (EPA 6010)	mg/kg	1,500.	ND	2.5

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 FAX: (714) 891-5917

**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932628-001  
 Date Sampled: 22-NOV-1989  
 Date Sample Rec'd: 22-NOV-1989  
 Date Analyzed: 8-DEC-1989  
 4-DEC-1989  
 29-NOV-1989  
 5-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB10-10'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	ND	ND	1
Arsenic/TTLC (EPA 7061)	mg/kg	0.68	ND	0.1
Barium/TTLC (EPA 6010)	mg/kg	44.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	16.	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	0.79	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	5.6	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	5.3	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	1,900.	ND	10
Lead/TTLC (EPA 6010)	mg/kg	800.	ND	10
Mercury/TTLC (EPA 7471)	mg/kg	0.02	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	5.7	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	44.	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	0.3	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	0.52	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	3.4	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	24,000.	ND	25

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932628-001  
 Date Sampled: 22-NOV-1989  
 Date Sample Rec'd: 22-NOV-1989  
 Date Analyzed: 15-DEC-1989  
 6-DEC-1989  
 28-NOV-1989  
 1-DEC-1989  
 7-DEC-1989  
 14-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB10-10'

Parameter	Units	Result	Blank	Detection Limit
Antimony, STLC (EPA 200.7)	mg/L	ND	ND	1
Arsenic, STLC (EPA 206.3)	mg/L	0.19	ND	0.02
Barium, STLC (EPA 200.7)	mg/L	5.6	ND	0.2
Beryllium, STLC (EPA 200.7)	mg/L	2.5	ND	0.2
Cadmium, STLC (EPA 200.7)	mg/L	ND	ND	0.2
Chromium, STLC (EPA 200.7)	mg/L	0.94	ND	0.2
Chromium, Hexavalent, STLC (EPA 7196)	mg/L	ND	ND	0.05
Cobalt, STLC (EPA 200.7)	mg/L	0.72	ND	0.2
Copper, STLC (EPA 200.7)	mg/L	150.	ND	0.5
Lead, STLC (EPA 200.7)	mg/L	120.	ND	0.5
Mercury, STLC (EPA 245.1)	mg/L	ND	ND	0.005
Molybdenum, STLC (EPA 200.7)	mg/L	1.0	ND	0.2
Nickel, STLC (EPA 200.7)	mg/L	5.1	ND	0.2
Selenium, STLC (EPA 270.3)	mg/L	0.06	ND	0.01
Silver, STLC (EPA 200.7)	mg/L	ND	ND	0.2
Thallium, STLC (EPA 279.1)	mg/L	ND	ND	0.3
Vanadium, STLC (EPA 200.7)	mg/L	0.22	ND	0.2
Zinc, STLC (EPA 200.7)	mg/L	3,200.	ND	10

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932628-002  
 Date Sampled: 22-NOV-1989  
 Date Sample Rec'd: 22-NOV-1989  
 Date Analyzed: 15-DEC-1989  
 8-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB9-3'

Parameter	Units	Result	Blank	Detection Limit
Aluminum/STLC (EPA 200.7)	mg/L	360.	ND	10
Iron/STLC (EPA 200.7)	mg/L	1,100.	ND	5
Manganese/STLC (EPA 200.7)	mg/L	150.	ND	0.2
Aluminum/TTLC (EPA 6010)	mg/kg	12,000.	ND	150
Iron/TTLC (EPA 6010)	mg/kg	23,000.	ND	500
Manganese/TTLC (EPA 6010)	mg/kg	2,200.	ND	2.5

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 FAX: (714) 891-5917

**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932628-002  
 Date Sampled: 22-NOV-1989  
 Date Sample Rec'd: 22-NOV-1989  
 Date Analyzed: 8-DEC-1989  
 4-DEC-1989  
 29-NOV-1989  
 5-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB9-3'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	120.	ND	5
Arsenic/TTLC (EPA 7061)	mg/kg	17.	ND	2
Barium/TTLC (EPA 6010)	mg/kg	100.	ND	0.25
Beryllium/TTLC (EPA 6010)	mg/kg	44.	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	2.3	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	11.	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	9.2	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	3,200.	ND	20
Lead/TTLC (EPA 6010)	mg/kg	1,200.	ND	10
Mercury/TTLC (EPA 7471)	mg/kg	0.14	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	9.3	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	90.	ND	0.25
Selenium/TTLC (EPA 7741)	mg/kg	0.5	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	2.5	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	6.2	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	25,000.	ND	0.5

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932628-002  
 Date Sampled: 22-NOV-1989  
 Date Sample Rec'd: 22-NOV-1989  
 Date Analyzed: 15-DEC-1989  
 6-DEC-1989  
 28-NOV-1989  
 1-DEC-1989  
 7-DEC-1989  
 14-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB9-3'

Parameter	Units	Result	Blank	Detection Limit
Antimony, STLC (EPA 200.7)	mg/L	89.	ND	1
Arsenic, STLC (EPA 206.3)	mg/L	0.04	ND	0.005
Barium, STLC (EPA 200.7)	mg/L	6.6	ND	0.2
Beryllium, STLC (EPA 200.7)	mg/L	4.2	ND	0.2
Cadmium, STLC (EPA 200.7)	mg/L	ND	ND	0.2
Chromium, STLC (EPA 200.7)	mg/L	ND	ND	0.2
Chromium, Hexavalent, STLC (EPA 7196)	mg/L	ND	ND	0.05
Cobalt, STLC (EPA 200.7)	mg/L	1.2	ND	0.2
Copper, STLC (EPA 200.7)	mg/L	30.	ND	0.5
Lead, STLC (EPA 200.7)	mg/L	97.	ND	0.5
Mercury, STLC (EPA 245.1)	mg/L	ND	ND	0.005
Molybdenum, STLC (EPA 200.7)	mg/L	1.0	ND	0.2
Nickel, STLC (EPA 200.7)	mg/L	5.2	ND	0.2
Selenium, STLC (EPA 270.3)	mg/L	0.05	ND	0.01
Silver, STLC (EPA 200.7)	mg/L	ND	ND	0.2
Thallium, STLC (EPA 279.1)	mg/L	ND	ND	0.3
Vanadium, STLC (EPA 200.7)	mg/L	ND	ND	0.2
Zinc, STLC (EPA 200.7)	mg/L	3,500.	ND	10

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 FAX: (714) 891-5917

**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932628-003  
 Date Sampled: 22-NOV-1989  
 Date Sample Rec'd: 22-NOV-1989  
 Date Analyzed: 15-DEC-1989  
 8-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB8-10'

Parameter	Units	Result	Blank	Detection Limit
Aluminum/STLC (EPA 200.7)	mg/L	400.	ND	10
Iron/STLC (EPA 200.7)	mg/L	1,100.	ND	5
Manganese/STLC (EPA 200.7)	mg/L	200.	ND	0.2
Aluminum/TTLC (EPA 6010)	mg/kg	8,100.	ND	150
Iron/TTLC (EPA 6010)	mg/kg	16,000.	ND	500
Manganese/TTLC (EPA 6010)	mg/kg	1,700.	ND	2.5

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 FAX: (714) 891-5917

**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932628-003  
 Date Sampled: 22-NOV-1989  
 Date Sample Rec'd: 22-NOV-1989  
 Date Analyzed: 8-DEC-1989  
 4-DEC-1989  
 29-NOV-1989  
 5-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB8-10'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	1,000.	ND	50
Arsenic/TTLC (EPA 7061)	mg/kg	1.1	ND	0.1
Barium/TTLC (EPA 6010)	mg/kg	63.	ND	2.5
Beryllium/TTLC (EPA 6010)	mg/kg	30.	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	1.3	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	16.	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	5.9	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	1,800.	ND	10
Lead/TTLC (EPA 6010)	mg/kg	440.	ND	2.0
Mercury/TTLC (EPA 7471)	mg/kg	0.06	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	5.1	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	43.	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	2.3	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	3.7	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	4.6	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	22,000.	ND	0.05

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**Enseco - CRL / South Coast**

7440 Lincoln Way • Garden Grove, CA 92641  
 (714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL  
 FAX: (714) 891-5917

**Laboratory Report**
**ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932628-003

Date Sampled: 22-NOV-1989

Date Sample Rec'd: 22-NOV-1989

Date Analyzed: 15-DEC-1989

6-DEC-1989

28-NOV-1989

1-DEC-1989

7-DEC-1989

14-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB8-10'

Parameter	Units	Result	Blank	Detection Limit
Antimony, STLC (EPA 200.7)	mg/L	290.	ND	10
Arsenic, STLC (EPA 206.3)	mg/L	0.12	ND	0.01
Barium, STLC (EPA 200.7)	mg/L	5.9	ND	0.2
Beryllium, STLC (EPA 200.7)	mg/L	4.3	ND	0.2
Cadmium, STLC (EPA 200.7)	mg/L	ND	ND	0.2
Chromium, STLC (EPA 200.7)	mg/L	0.60	ND	0.2
Chromium, Hexavalent, STLC (EPA 7196)	mg/L	ND	ND	0.05
Cobalt, STLC (EPA 200.7)	mg/L	0.81	ND	0.2
Copper, STLC (EPA 200.7)	mg/L	ND	ND	0.5
Lead, STLC (EPA 200.7)	mg/L	39.	ND	0.5
Mercury, STLC (EPA 245.1)	mg/L	ND	ND	0.005
Molybdenum, STLC (EPA 200.7)	mg/L	0.45	ND	0.2
Nickel, STLC (EPA 200.7)	mg/L	6.2	ND	0.2
Selenium, STLC (EPA 270.3)	mg/L	ND	ND	0.01
Silver, STLC (EPA 200.7)	mg/L	ND	ND	0.2
Thallium, STLC (EPA 279.1)	mg/L	ND	ND	0.3
Vanadium, STLC (EPA 200.7)	mg/L	ND	ND	0.2
Zinc, STLC (EPA 200.7)	mg/L	2,400.	ND	10

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**Laboratory Report**

ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8932628-004  
Date Sampled: 22-NOV-1989  
Date Sample Rec'd: 22-NOV-1989  
Date Analyzed: 8-DEC-1989  
Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: SB10-16'

Parameter	Units	Result	Blank	Detection Limit
Aluminum/TTLC (EPA 6010)	mg/kg	3,400.	ND	30
Iron/TTLC (EPA 6010)	mg/kg	5,400.	ND	200
Manganese/TTLC (EPA 6010)	mg/kg	290.	ND	0.5

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## **Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932628-005  
 Date Sampled: 22-NOV-1989  
 Date Sample Rec'd: 22-NOV-1989  
 Date Analyzed: 8-DEC-1989  
 Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB10-30'

Parameter	Units	Result	Blank	Detection Limit
Aluminum/TTLC (EPA 6010)	mg/kg	3,400.	ND	30
Iron/TTLC (EPA 6010)	mg/kg	5,400.	ND	200
Manganese/TTLC (EPA 6010)	mg/kg	110.	ND	0.25

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8932628-004  
 Date Sampled: 22-NOV-1989  
 Date Sample Rec'd: 22-NOV-1989  
 Date Analyzed: 8-DEC-1989  
 4-DEC-1989  
 29-NOV-1989  
 5-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: SB10-16'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	370.	ND	10
Arsenic/TTLC (EPA 7061)	mg/kg	19.	ND	2
Barium/TTLC (EPA 6010)	mg/kg	38.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	5.3	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	0.33	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	5.1	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	2.7	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	300.	ND	2.0
Lead/TTLC (EPA 6010)	mg/kg	110.	ND	1.0
Mercury/TTLC (EPA 7471)	mg/kg	ND	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	2.4	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	12.	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	22.	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	0.11	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	6.4	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	4,000.	ND	0.05

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## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8932628-005  
Date Sampled: 22-NOV-1989  
Date Sample Rec'd: 22-NOV-1989  
Date Analyzed: 8-DEC-1989  
4-DEC-1989  
29-NOV-1989  
5-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: SB10-30'

Parameter	Units	Result	Blank	Detection Limit
Antimony/TTLC (EPA 6010)	mg/kg	240.	ND	5
Arsenic/TTLC (EPA 7061)	mg/kg	180.	ND	20
Barium/TTLC (EPA 6010)	mg/kg	31.	ND	0.05
Beryllium/TTLC (EPA 6010)	mg/kg	0.17	ND	0.05
Cadmium/TTLC (EPA 6010)	mg/kg	0.08	ND	0.05
Chromium, Total/TTLC (EPA 6010)	mg/kg	4.8	ND	0.05
Chromium, Hex/TTLC (EPA 7196)	mg/kg	ND	ND	1
Cobalt/TTLC (EPA 6010)	mg/kg	1.8	ND	0.05
Copper/TTLC (EPA 6010)	mg/kg	3.8	ND	0.2
Lead/TTLC (EPA 6010)	mg/kg	1.6	ND	0.2
Mercury/TTLC (EPA 7471)	mg/kg	0.03	ND	0.02
Molybdenum/TTLC (EPA 6010)	mg/kg	0.57	ND	0.05
Nickel/TTLC (EPA 6010)	mg/kg	5.1	ND	0.05
Selenium/TTLC (EPA 7741)	mg/kg	53.	ND	0.1
Silver/TTLC (EPA 6010)	mg/kg	ND	ND	0.05
Thallium/TTLC (EPA 7840)	mg/kg	ND	ND	1.0
Vanadium/TTLC (EPA 6010)	mg/kg	6.7	ND	0.05
Zinc/TTLC (EPA 6010)	mg/kg	9.7	ND	0.05

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson  
 Project: (9500-089) KRAMER - EL SEGUNDO

Analysis No.: G-8932628-001/005  
 Date Sampled: 22-NOV-1989  
 Date Sample Rec'd: 22-NOV-1989  
 Sample Type: SOLID

**QA/QC Summary**

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
15-DEC-1989	ALUMINUM (EPA 200.7)	L	93	60-130	9.	30
15-DEC-1989	IRON (EPA 200.7)	L	78	60-130	15.	40
15-DEC-1989	MANGANESE (EPA 200.7)	L	98	60-130	1.	40
15-DEC-1989	ANTIMONY (EPA 200.7)	L	95	68-137	1.	30
15-DEC-1989	BARIUM (EPA 200.7)	L	95	63-137	2.	30
15-DEC-1989	BERYLLIUM (EPA 200.7)	L	94	66-130	1.	30
15-DEC-1989	CADMIUM (EPA 200.7)	L	98	72-141	2.	25
15-DEC-1989	CHROMIUM (EPA 200.7)	L	104	69-148	2.	30
15-DEC-1989	COBALT (EPA 200.7)	L	98	73-132	2.	30
15-DEC-1989	COPPER (EPA 200.7)	L	93	68-129	3.	25
15-DEC-1989	LEAD (EPA 200.7)	L	98	65-144	2.	25
15-DEC-1989	MOLYBDENUM (EPA 200.7)	L	98	69-144	6.	25
15-DEC-1989	NICKEL (EPA 200.7)	L	100	65-146	3.	25
15-DEC-1989	SILVER (EPA 200.7)	L	95	25-147	4.	52
15-DEC-1989	VANADIUM (EPA 200.7)	L	99	73-130	0.	25
15-DEC-1989	ZINC (EPA 200.7)	L	96	73-138	6.	25
6-DEC-1989	ARSENIC (EPA 206.3)	L	108	78-118	5.	25
1-DEC-1989	MERCURY (EPA 245.1)	L	100	41-137	10.	37
7-DEC-1989	SELENIUM (EPA 270.3)	L	118	41-137	6.	25
14-DEC-1989	THALLIUM (EPA 279.1)	L	98	75-109	5.	25
8-DEC-1989	ALUMINUM (EPA 6010)	L	100	60-130	0.	30
8-DEC-1989	IRON (EPA 6010)	L	98	60-130	2.	30
8-DEC-1989	MANGANESE (EPA 6010)	L	85	60-130	8.	30
8-DEC-1989	ANTIMONY (EPA 6010)	L	73	15-169	3.	95
8-DEC-1989	BARIUM (EPA 6010)	L	78	15-155	3.	95
8-DEC-1989	BERYLLIUM (EPA 6010)	L	82	18-110	3.	35
8-DEC-1989	CADMIUM (EPA 6010)	L	84	18-126	4.	95
8-DEC-1989	CHROMIUM (EPA 6010)	L	86	15-210	5.	95
8-DEC-1989	COBALT (EPA 6010)	L	84	15-132	2.	45
8-DEC-1989	COPPER (EPA 6010)	L	81	15-161	3.	77
8-DEC-1989	LEAD (EPA 6010)	L	83	22-166	4.	95
8-DEC-1989	MOLYBDENUM (EPA 6010)	L	88	15-130	3.	92
8-DEC-1989	NICKEL (EPA 6010)	L	85	16-142	2.	95
8-DEC-1989	SILVER (EPA 6010)	L	80	24-108	1.	95
8-DEC-1989	VANADIUM (EPA 6010)	L	84	25-139	5.	58
8-DEC-1989	ZINC (EPA 6010)	L	84	15-164	3.	95

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**Laboratory Report**
**ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365

Irvine, CA 92715

ATTN: Mr. Erik Nelson

Project: (9500-089) KRAMER - EL SEGUNDO

Analysis No.: G-8932628-001/005

Date Sampled: 22-NOV-1989

Date Sample Rec'd: 22-NOV-1989

Sample Type: SOLID

**QA/QC Summary**

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
30-NOV-1989	CHROMIUM, HEX/TTLC (EPA 7196)	L	92	60-130	9.	40
28-NOV-1989	CHROMIUM, HEXAVALENT (EPA 7196)	L	103	60-130	10.	40
5-DEC-1989	MERCURY (EPA 7471)	L	95	25-125	16.	51
4-DEC-1989	SELENIUM (EPA 7741)	L	68	30-103	2.	30
8-DEC-1989	THALLIUM (EPA 7840)	L	69	42-127	3.	39

M = Matrix Spike

L = Laboratory Control Sample Spike

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# CHAIN OF CUSTODY RECORD

93262

Client/Project Name <b>KRAMER</b>			Project Location <b>El Segundo</b>			ANALYSES <div style="display: flex; justify-content: space-around; font-size: 0.8em;"> <div style="transform: rotate(-45deg);">17 CAM METALS</div> <div style="transform: rotate(-45deg);">AR, FE, Mn</div> <div style="transform: rotate(-45deg);">STL 17 CAM METALS</div> <div style="transform: rotate(-45deg);">82410</div> <div style="transform: rotate(-45deg);">HOLD</div> </div>							
Project No. <b>9500-089</b>			Field Logbook No.										
Sampler: (Signature) <i>Christina Stuber</i>			Chain of Custody Tape No.										
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample							REMARKS		
SB10-5'	11/22			Soil							X		
SB10-10'	}	}			X	X	X						
SB10-16'					X	X							
SB10-17.5'												X	
SB10-19'												X	
SB10-25'												X	
SB10-30'									X	X			
SB10-35'											X		
Relinquished by: (Signature) <i>Christina Stuber</i>				Date 11/22	Time 1300	Received by: (Signature) <i>Paul A. Cantan</i>				Date 11/24/89	Time 2:10 PM		
Relinquished by: (Signature) <i>Paul A. Cantan</i>				Date 11/24/89	Time 6:31 P.M.	Received by: (Signature)				Date	Time		
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <i>melj</i>				Date 11-22	Time 6:31 pm		
Sample Disposal Method:				Disposed of by: (Signature)						Date	Time		
SAMPLE COLLECTOR				ANALYTICAL LABORATORY						ENSR			
										1/2			

# CHAIN OF CUSTODY RECORD

932628

Client/Project Name <b>KRAMER</b>			Project Location <b>76 SEWDO</b>			<div style="text-align: center;">ANALYSES</div> <div style="display: flex; justify-content: space-around; transform: rotate(-45deg);"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TLC 17 Cam Method</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">AL, Fe, Mn</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">STC 17 Cam Method</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8240</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">H610</div> </div>					
Project No. <b>9500</b>			Field Logbook No. _____								
Sampler: (Signature) <b>Christian Astutis</b>			Chain of Custody Tape No. _____								
Sample No. / Identification	Date	Time	Lab Sample Number	Type of Sample	REMARKS						
SB10-40'	11/22	}									
SB10-45'											
SB9-3'						X	X	X			
SB8-5'										X	
SB8-10'					X	X	X				
Relinquished by: (Signature) <b>Christian Astutis</b>				Date 11/22	Time 1300	Received by: (Signature) <b>Fuller</b>				Date 11/22/89	Time 2:10 P.M.
Relinquished by: (Signature) <b>Fuller</b>				Date 11/22/89	Time 4:31 P.M.	Received by: (Signature)				Date	Time
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <b>Fuller</b>				Date 11-22	Time 6:31 pm
Sample Disposal Method:				Disposed of by: (Signature) <b>Fuller</b>						Date	Time
SAMPLE COLLECTOR				ANALYTICAL LABORATORY						<div style="text-align: center; font-weight: bold; font-size: 1.5em;">ENSR</div> <div style="text-align: center; font-size: 1.5em;">2/2</div>	

**SECTION 8**

**Enseco - CRL**

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(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL  
FAX: (714) 891-5917

RECEIVED  
JAN 10 1990  
Ans'd .....

January 5, 1990

ENSR CONSTRUCTORS  
19782 MACARTHUR BLVD., SUITE 365  
IRVINE, CA 92715  
ATTN: MR. ERIK NELSON

Analysis No.: G-8935431-001/004  
Date Sampled: 17-NOV-1989  
Date Relogged: 20-DEC-1989  
Project: (9500-089) KRAMER-EL SEGUNDO

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8935431-001/004 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

Solid samples are reported on "as received" basis.

Preliminary data were provided on January 4, 1990 at 9:05 A.M.



Reviewed



Approved

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FAX: (714) 891-5917

**Laboratory Report****ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8935431-001/004

Date Sampled: 17-NOV-1989

Date Sample Rec'd: 20-NOV-1989

Date Analyzed: 3-JAN-1990

Date Relogged: 20-DEC-1989

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO

Sample ID	Arsenic/ STLC mg/L EPA 206.3
SB6-15	48.
MW4-20	54.
MW5-5	82.
MW5-20	0.036
Blank	ND(.005)

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**Laboratory Report**

-----  
ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8935431-001/004  
Date Sampled: 17-NOV-1989  
Date Sample Rec'd: 20-NOV-1989  
Date Relogged: 20-DEC-1989  
Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
-----

**QA/QC Summary**

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
3-JAN-1990	ARSENIC (EPA 206.3)	L	104	78-118	2.	25

M = Matrix Spike

L = Laboratory Control Sample Spike

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**SECTION 9**

**Enseco - CRL / South Coast**

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FAX: (714) 891-5917

December 20, 1989

ENSR CONSTRUCTORS  
19782 MacARTHUR BLVD., SUITE 365  
IRVINE, CA 92715  
ATTN: MR. ERIK NELSON

Analysis No.: G-8933905-001/001  
Date Sampled: 4-DEC-1989  
Date Sample Rec'd: 5-DEC-1989  
Project: (9500-089) KRAMER - EL SEGUNDO

Enclosed with this letter is the report on the chemical and physical analyses on the sample from ANALYSIS NO: G-8933905-001/001 shown above.

The sample was received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

  
Reviewed

  
Approved

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FAX: (714) 891-5917

**Laboratory Report****ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8933905-001/001

Date Sampled: 4-DEC-1989

Date Sample Rec'd: 5-DEC-1989

Date Analyzed: 8-DEC-1989

Sample Type: LIQUID

Project: (9500-089) KRAMER - EL SEGUNDO

Sample ID	Aluminum	Iron	Manganese
	mg/L EPA 200.7	mg/L EPA 200.7	mg/L EPA 200.7
MW1	0.17	ND(0.05)	0.06
Blank	ND(0.10)	ND(0.05)	ND(0.02)

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 FAX: (714) 891-5917

**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8933905-001  
 Date Sampled: 4-DEC-1989  
 Date Sample Rec'd: 5-DEC-1989  
 Date Analyzed: 14-DEC-1989  
 Sample Type: LIQUID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: MW1

**Purgeable Organics, EPA 624**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Acetone	ND	ND	10
Carbon Disulfide	ND	ND	5
Trichlorofluoromethane	ND	ND	5
1,1-Dichloroethene	19.	ND	5
1,1-Dichloroethane	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	ND	ND	5
1,2-Dichloroethane	ND	ND	5
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	12.	ND	5
Carbon Tetrachloride	ND	ND	5
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
Trichloroethene	370.	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	ND	ND	5
cis-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	200.	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylenes, Total	ND	ND	5

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**Laboratory Report**
**ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8933905-001

Date Sampled: 4-DEC-1989

Date Sample Rec'd: 5-DEC-1989

Date Analyzed: 11-DEC-1989

8-DEC-1989

6-DEC-1989

12-DEC-1989

Sample Type: LIQUID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: MW1

Parameter	Units	Result	Blank	Detection Limit
Arsenic, TTLC (EPA 206.3)	mg/L	3.2	ND	0.50
Antimony, TTLC (EPA 200.7)	mg/L	ND	ND	0.1
Barium, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Beryllium, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Cadmium, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Chromium, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Chromium, Hex, TTLC (EPA 7196)	mg/L	ND	ND	0.05
Cobalt, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Copper, TTLC (EPA 200.7)	mg/L	ND	ND	0.05
Lead, TTLC (EPA 200.7)	mg/L	ND	ND	0.05
Mercury, TTLC (EPA 245.1)	mg/L	ND	ND	0.001
Molybdenum, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Nickel, TTLC (EPA 200.7)	mg/L	0.02	ND	0.02
Selenium, TTLC (EPA 270.3)	mg/L	0.02	ND	0.01
Silver, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Thallium, TTLC (EPA 279.1)	mg/L	ND	ND	0.3
Vanadium, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Zinc, TTLC (EPA 200.7)	mg/L	0.05	ND	0.02

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## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson  
Project: (9500-089) KRAMER - EL SEGUNDO

Analysis No.: G-8933905-001/001  
Date Sampled: 4-DEC-1989  
Date Sample Rec'd: 5-DEC-1989  
Sample Type: LIQUID

## QA/QC Summary

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
7-DEC-1989	ALUMINUM (EPA 200.7)	L	98	60-130	2.	30
7-DEC-1989	IRON (EPA 200.7)	L	99	60-130	2.	40
7-DEC-1989	MANGANESE (EPA 200.7)	L	100	60-130	1.	40
7-DEC-1989	ANTIMONY (EPA 200.7)	L	103	68-137	2.	30
7-DEC-1989	BARIUM (EPA 200.7)	L	99	63-137	1.	30
7-DEC-1989	BERYLLIUM (EPA 200.7)	L	96	66-130	1.	30
7-DEC-1989	CADMIUM (EPA 200.7)	L	97	72-141	1.	25
7-DEC-1989	CHROMIUM (EPA 200.7)	L	105	69-148	1.	30
7-DEC-1989	COBALT (EPA 200.7)	L	98	73-132	1.	30
7-DEC-1989	COPPER (EPA 200.7)	L	95	68-129	2.	25
7-DEC-1989	LEAD (EPA 200.7)	L	98	65-144	2.	25
7-DEC-1989	MOLYBDENUM (EPA 200.7)	L	103	69-144	2.	25
7-DEC-1989	NICKEL (EPA 200.7)	L	99	65-146	1.	25
7-DEC-1989	SILVER (EPA 200.7)	L	99	25-147	1.	52
7-DEC-1989	VANADIUM (EPA 200.7)	L	101	73-130	2.	25
7-DEC-1989	ZINC (EPA 200.7)	L	95	73-138	4.	25
11-DEC-1989	ARSENIC (EPA 206.3)	L	106	78-118	7.	25
11-DEC-1989	MERCURY (EPA 245.1)	L	88	41-137	6.	37
11-DEC-1989	SELENIUM (EPA 270.3)	L	107	41-137	1.	25
12-DEC-1989	THALLIUM (EPA 279.1)	L	95	75-109	0.	25
13-DEC-1989	1,1-DICHLOROETHENE (EPA 624)	L	79	58-118	2.	12
13-DEC-1989	TRICHLOROETHENE (EPA 624)	L	94	69-121	7.	16
13-DEC-1989	BENZENE (EPA 624)	L	100	63-120	9.	12
13-DEC-1989	TOLUENE (EPA 624)	L	95	68-121	6.	16
13-DEC-1989	CHLOROBENZENE (EPA 624)	L	98	66-123	4.	13
6-DEC-1989	CHROMIUM, HEX, TTLC (EPA 7196)	L	92	60-130	4.	40

M = Matrix Spike

L = Laboratory Control Sample Spike

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## CHAIN OF CUSTODY RECORD

933905

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO, CA</b>			ANALYSES  8240 ICAP METALS 6010					
Project No. <b>9500-089</b>			Field Logbook No. /								
Sampler: (Signature) <b>Bill Luv</b>			Chain of Custody Tape No. /								
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample							REMARKS
MW1	12-4-89			H <sub>2</sub> O	X						
MW1-BK	)			)							BACK UP
MW-1						X					
Relinquished by: (Signature) <b>Bill Luv</b>				Date 12-5-89	Time	Received by: (Signature) <b>[Signature]</b>				Date 12-5-89	Time 10:20
Relinquished by: (Signature) <b>[Signature]</b>				Date 12-5-89	Time 11-15	Received by: (Signature)				Date	Time
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <b>[Signature]</b>				Date 12/5/89	Time 11:15
Sample Disposal Method:				Disposed of by: (Signature)						Date	Time
SAMPLE COLLECTOR ENSR CORPORATION 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321				ANALYTICAL LABORATORY <b>CRL</b>						ENSR  1/1	

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RECEIVED

DEC 27 1989

Ans'd .....

December 20, 1989

ENSR CONSTRUCTORS  
19782 MacARTHUR BLVD., SUITE 365  
IRVINE, CA 92715  
ATTN: MR. ERIK NELSON

Analysis No.: G-8933827-001/003  
Date Sampled: 4-DEC-1989  
Date Sample Rec'd: 4-DEC-1989  
Project: (9500-089) KRAMER - EL SEGUNDO

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8933827-001/003 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

Joan R. DelaCruz  
Reviewed

Paul Christie  
Approved

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## **Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8933827-001/003  
 Date Sampled: 4-DEC-1989  
 Date Sample Rec'd: 4-DEC-1989  
 Date Analyzed: 8-DEC-1989  
 Sample Type: LIQUID

Project: (9500-089) KRAMER - EL SEGUNDO

Sample ID	Aluminum mg/L EPA 200.7	Iron mg/L EPA 200.7	Manganese mg/L EPA 200.7
MW8	2.2	2.1	0.42
MW9	ND(0.10)	ND(0.05)	ND(0.02)
MW6	1.9	1.8	1.9
Blank	ND(0.10)	ND(0.05)	ND(0.02)

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## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8933827-001  
Date Sampled: 4-DEC-1989  
Date Sample Rec'd: 4-DEC-1989  
Date Analyzed: 14-DEC-1989  
Sample Type: LIQUID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: MW8

### Purgeable Organics, EPA 624

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Acetone	ND	ND	10
Carbon Disulfide	ND	ND	5
Trichlorofluoromethane	ND	ND	5
1,1-Dichloroethene	5.	ND	5
1,1-Dichloroethane	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	ND	ND	5
1,2-Dichloroethane	ND	ND	5
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
Trichloroethene	88.	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	ND	ND	5
cis-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	25.	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylenes, Total	ND	ND	5

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**Laboratory Report**
**ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365

Irvine, CA 92715

ATTN: Mr. Erik Nelson

Analysis No.: G-8933827-001

Date Sampled: 4-DEC-1989

Date Sample Rec'd: 4-DEC-1989

Date Analyzed: 11-DEC-1989

8-DEC-1989

6-DEC-1989

12-DEC-1989

Sample Type: LIQUID

Project: (9500-089) KRAMER - EL SEGUNDO

Sample ID: MW8

Parameter	Units	Result	Blank	Detection Limit
Arsenic, TTLC (EPA 206.3)	mg/L	ND	ND	0.005
Antimony, TTLC (EPA 200.7)	mg/L	ND	ND	0.1
Barium, TTLC (EPA 200.7)	mg/L	0.03	ND	0.02
Beryllium, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Cadmium, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Chromium, TTLC (EPA 200.7)	mg/L	0.02	ND	0.02
Chromium, Hex, TTLC (EPA 7196)	mg/L	ND	ND	0.05
Cobalt, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Copper, TTLC (EPA 200.7)	mg/L	ND	ND	0.05
Lead, TTLC (EPA 200.7)	mg/L	ND	ND	0.05
Mercury, TTLC (EPA 245.1)	mg/L	ND	ND	0.001
Molybdenum, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Nickel, TTLC (EPA 200.7)	mg/L	0.06	ND	0.02
Selenium, TTLC (EPA 270.3)	mg/L	0.01	ND	0.01
Silver, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Thallium, TTLC (EPA 279.1)	mg/L	ND	ND	0.3
Vanadium, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Zinc, TTLC (EPA 200.7)	mg/L	0.04	ND	0.02

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**Laboratory Report**
**ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8933827-002

Date Sampled: 4-DEC-1989

Date Sample Rec'd: 4-DEC-1989

Date Analyzed: 11-DEC-1989

8-DEC-1989

6-DEC-1989

12-DEC-1989

Sample Type: LIQUID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: MW9

Parameter	Units	Result	Blank	Detection Limit
Arsenic, TTLC (EPA 206.3)	mg/L	ND	ND	0.005
Antimony, TTLC (EPA 200.7)	mg/L	ND	ND	0.1
Barium, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Beryllium, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Cadmium, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Chromium, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Chromium, Hex, TTLC (EPA 7196)	mg/L	ND	ND	0.05
Cobalt, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Copper, TTLC (EPA 200.7)	mg/L	ND	ND	0.05
Lead, TTLC (EPA 200.7)	mg/L	ND	ND	0.05
Mercury, TTLC (EPA 245.1)	mg/L	ND	ND	0.001
Molybdenum, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Nickel, TTLC (EPA 200.7)	mg/L	0.03	ND	0.02
Selenium, TTLC (EPA 270.3)	mg/L	ND	ND	0.01
Silver, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Thallium, TTLC (EPA 279.1)	mg/L	ND	ND	0.3
Vanadium, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Zinc, TTLC (EPA 200.7)	mg/L	ND	ND	0.02

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FAX: (714) 891-5917

## Laboratory Report

### ENSR CONSTRUCTORS

19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8933827-002

Date Sampled: 4-DEC-1989

Date Sample Rec'd: 4-DEC-1989

Date Analyzed: 14-DEC-1989

Sample Type: LIQUID

Project: (9500-089) KRAMER - EL SEGUNDO

Sample ID: MW9

### Purgeable Organics, EPA 624

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Acetone	ND	ND	10
Carbon Disulfide	ND	ND	5
Trichlorofluoromethane	ND	ND	5
1,1-Dichloroethene	ND	ND	5
1,1-Dichloroethane	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	ND	ND	5
1,2-Dichloroethane	ND	ND	5
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
Trichloroethene	ND	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	ND	ND	5
cis-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylenes, Total	ND	ND	5

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 FAX: (714) 891-5917

**Laboratory Report**
**ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8933827-003

Date Sampled: 4-DEC-1989

Date Sample Rec'd: 4-DEC-1989

Date Analyzed: 11-DEC-1989

8-DEC-1989

6-DEC-1989

12-DEC-1989

Sample Type: LIQUID

Project: (9500-089) KRAMER - EL SEGUNDO  
 Sample ID: MW6

Parameter	Units	Result	Blank	Detection Limit
Arsenic, TTLC (EPA 206.3)	mg/L	25.	ND	3
Antimony, TTLC (EPA 200.7)	mg/L	ND	ND	0.1
Barium, TTLC (EPA 200.7)	mg/L	0.03	ND	0.02
Beryllium, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Cadmium, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Chromium, TTLC (EPA 200.7)	mg/L	0.23	ND	0.02
Chromium, Hex, TTLC (EPA 7196)	mg/L	0.23	ND	0.1
Cobalt, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Copper, TTLC (EPA 200.7)	mg/L	ND	ND	0.05
Lead, TTLC (EPA 200.7)	mg/L	ND	ND	0.05
Mercury, TTLC (EPA 245.1)	mg/L	ND	ND	0.001
Molybdenum, TTLC (EPA 200.7)	mg/L	0.05	ND	0.02
Nickel, TTLC (EPA 200.7)	mg/L	0.07	ND	0.02
Selenium, TTLC (EPA 270.3)	mg/L	0.03	ND	0.01
Silver, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Thallium, TTLC (EPA 279.1)	mg/L	ND	ND	0.3
Vanadium, TTLC (EPA 200.7)	mg/L	0.04	ND	0.02
Zinc, TTLC (EPA 200.7)	mg/L	0.11	ND	0.02

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FAX: (714) 891-5917

## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8933827-003  
Date Sampled: 4-DEC-1989  
Date Sample Rec'd: 4-DEC-1989  
Date Analyzed: 14-DEC-1989  
Sample Type: LIQUID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: MW6

### Purgeable Organics, EPA 624

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Acetone	ND	ND	10
Carbon Disulfide	ND	ND	5
Trichlorofluoromethane	73.	ND	5
1,1-Dichloroethene	8.	ND	5
1,1-Dichloroethane	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	24.	ND	5
1,2-Dichloroethane	ND	ND	5
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	10.	ND	5
Carbon Tetrachloride	43.	ND	5
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
Trichloroethene	110.	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	ND	ND	5
cis-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylenes, Total	ND	ND	5

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## Laboratory Report

### ENSR CONSTRUCTORS

19782 MacArthur Blvd., Suite 365

Irvine, CA 92715

ATTN: Mr. Erik Nelson

Project: (9500-089) KRAMER - EL SEGUNDO

Analysis No.: G-8933827-001/003

Date Sampled: 4-DEC-1989

Date Sample Rec'd: 4-DEC-1989

Sample Type: LIQUID

## QA/QC Summary

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
7-DEC-1989	ALUMINUM (EPA 200.7)	L	98	60-130	2.	30
7-DEC-1989	IRON (EPA 200.7)	L	99	60-130	2.	40
7-DEC-1989	MANGANESE (EPA 200.7)	L	100	60-130	1.	40
7-DEC-1989	ANTIMONY (EPA 200.7)	L	103	68-137	2.	30
7-DEC-1989	BARIUM (EPA 200.7)	L	99	63-137	1.	30
7-DEC-1989	BERYLLIUM (EPA 200.7)	L	96	66-130	1.	30
7-DEC-1989	CADMIUM (EPA 200.7)	L	97	72-141	1.	25
7-DEC-1989	CHROMIUM (EPA 200.7)	L	105	69-148	1.	30
7-DEC-1989	COBALT (EPA 200.7)	L	98	73-132	1.	30
7-DEC-1989	COPPER (EPA 200.7)	L	95	68-129	2.	25
7-DEC-1989	LEAD (EPA 200.7)	L	98	65-144	2.	25
7-DEC-1989	MOLYBDENUM (EPA 200.7)	L	103	69-144	2.	25
7-DEC-1989	NICKEL (EPA 200.7)	L	99	65-146	1.	25
7-DEC-1989	SILVER (EPA 200.7)	L	99	25-147	1.	52
7-DEC-1989	VANADIUM (EPA 200.7)	L	101	73-130	2.	25
7-DEC-1989	ZINC (EPA 200.7)	L	95	73-138	4.	25
12-DEC-1989	ARSENIC (EPA 206.3)	L	104	78-118	2.	25
11-DEC-1989	MERCURY (EPA 245.1)	L	88	41-137	6.	37
11-DEC-1989	SELENIUM (EPA 270.3)	L	107	41-137	1.	25
12-DEC-1989	THALLIUM (EPA 279.1)	L	95	75-109	0.	25
13-DEC-1989	1,1-DICHLOROETHENE (EPA 624)	L	79	58-118	2.	12
13-DEC-1989	TRICHLOROETHENE (EPA 624)	L	94	69-121	7.	16
13-DEC-1989	BENZENE (EPA 624)	L	100	63-120	9.	12
13-DEC-1989	TOLUENE (EPA 624)	L	95	68-121	6.	16
13-DEC-1989	CHLOROBENZENE (EPA 624)	L	98	66-123	4.	13
6-DEC-1989	CHROMIUM, HEX, TTLC (EPA 7196)	L	92	60-130	4.	40

M = Matrix Spike

L = Laboratory Control Sample Spike

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# CHAIN OF CUSTODY RECORD

933327

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO, CA</b>			ANALYSES <i>0240</i> <i>TEAP MEALS 6010</i>						
Project No. <b>9500-089</b>			Field Logbook No. <i>/</i>									
Sampler: (Signature) <i>Bin</i>			Chain of Custody Tape No. <i>/</i>									
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample								REMARKS
MW9	12-4-89			H <sub>2</sub> O	X							
MW9-BKI	}			}	X							
MW-9							X					
Relinquished by: (Signature) <i>Bin</i>				Date 12-4-89	Time 2:45	Received by: (Signature) <i>Paul A. Carter</i>				Date 12/4/89	Time 2:45 PM	
Relinquished by: (Signature) <i>Paul A. Carter</i>				Date 12-4-89	Time 5:36 PM	Received by: (Signature)				Date	Time	
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <i>Bin</i>				Date 12/4	Time 5:30	
Sample Disposal Method:				Disposed of by: (Signature)						Date	Time	
SAMPLE COLLECTOR <b>ENSR-IRVINE</b>				ANALYTICAL LABORATORY <b>CRL</b>						<b>ENSR</b>		
										1/1		

# CHAIN OF CUSTODY RECORD

433827

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO, CA</b>			ANALYSES  8240 ICAP WEIRUS 6010					
Project No. <b>9500-089</b>			Field Logbook No. /								
Sampler: (Signature) <b>Bir River</b>			Chain of Custody Tape No. /								
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	REMARKS						
MWB	12-4-89			H <sub>2</sub> O	X						
MWB-BK	}			}							BACK up
MW-B							X				
Relinquished by: (Signature) <b>Bir River</b>				Date <b>12-4-89</b>	Time <b>2:45</b>	Received by: (Signature) <b>Paul Alcantara</b>				Date <b>12-4-89</b>	Time <b>2:45 PM</b>
Relinquished by: (Signature) <b>Paul Alcantara</b>				Date <b>12-4-89</b>	Time <b>5:30 PM</b>	Received by: (Signature)				Date	Time
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <b>R. J.</b>				Date <b>12/4</b>	Time <b>5:30</b>
Sample Disposal Method:				Disposed of by: (Signature)						Date	Time
SAMPLE COLLECTOR <b>ENSR</b> <b>IRVINE, CA</b>				ANALYTICAL LABORATORY <b>CRL</b>						<b>ENSR</b>	
										1/1	

# CHAIN OF CUSTODY RECORD

733327

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO, CA</b>			ANALYSES  B240 ICAP MEALS 6010					
Project No. <b>9500-089</b>			Field Logbook No. /								
Sampler: (Signature) <i>Bin R...</i>			Chain of Custody Tape No. /								
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	REMARKS						
MW 6	12-4-89			H <sub>2</sub> O	X						
MW 6-BK	)			)							Back up
MW-6						X					
Relinquished by: (Signature) <i>Bin R...</i>				Date 12-4-89	Time 2:45	Received by: (Signature) <i>Dr. Alcantara</i>				Date 12-4-89	Time 2:45 PM
Relinquished by: (Signature) <i>Dr. Alcantara</i>				Date 12-4-89	Time 5:30 PM	Received by: (Signature)				Date	Time
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <i>Rm...</i>				Date 12/4	Time 5:33
Sample Disposal Method:				Disposed of by: (Signature)						Date	Time
SAMPLE COLLECTOR <b>ENSR - IRVINE</b>				ANALYTICAL LABORATORY <b>CRL</b>						<b>ENSR</b>  1/1	

**Enseco - CRL**

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January 3, 1990

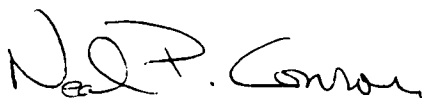
ENSR CONSTRUCTORS  
19782 MacARTHUR BLVD., STE 365  
IRVINE, CA 92715  
ATTN: MR. ERIK NELSON

Analysis No.: G-8934925-001/004  
Date Sampled: 15-DEC-1989  
Date Sample Rec'd: 15-DEC-1989  
Project: (9500-089) KRAMER

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8934925-001/004 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.



Reviewed



Approved

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8934925-001  
 Date Sampled: 15-DEC-1989  
 Date Sample Rec'd: 15-DEC-1989  
 Date Analyzed: 18-DEC-1989  
 Sample Type: LIQUID

Project: (9500-089) KRAMER  
 Sample ID: MW2

**Purgeable Organics, EPA 624**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5.0
Acetone	ND	ND	10
Carbon Disulfide	ND	ND	5.0
Trichlorofluoromethane	ND	ND	5.0
1,1-Dichloroethene	ND	ND	5.0
1,1-Dichloroethane	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	5.0
Chloroform	ND	ND	5.0
1,2-Dichloroethane	ND	ND	5.0
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5.0
Carbon Tetrachloride	ND	ND	5.0
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5.0
1,2-Dichloropropane	ND	ND	5.0
trans-1,3-Dichloropropene	ND	ND	5.0
Trichloroethene	40.	ND	5.0
Dibromochloromethane	ND	ND	5.0
1,1,2-Trichloroethane	ND	ND	5.0
Benzene	ND	ND	5.0
cis-1,3-Dichloropropene	ND	ND	5.0
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5.0
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	16.	ND	5.0
1,1,2,2-Tetrachloroethane	ND	ND	5.0
Toluene	18.	ND	5.0
Chlorobenzene	ND	ND	5.0
Ethylbenzene	ND	ND	5.0
Styrene	ND	ND	5.0
Xylenes, Total	ND	ND	5.0

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**Laboratory Report**

-----  
ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8934925-001  
Date Sampled: 15-DEC-1989  
Date Sample Rec'd: 15-DEC-1989  
Date Analyzed: 22-DEC-1989  
Sample Type: LIQUID

Project: (9500-089) KRAMER  
Sample ID: MW2  
-----

Parameter	Units	Result	Blank	Detection Limit
Aluminum (EPA 200.7)	mg/L	0.49	ND	0.10
Iron (EPA 200.7)	mg/L	0.15	ND	0.05
Manganese (EPA 200.7)	mg/L	3.3	ND	0.02

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8934925-002  
 Date Sampled: 15-DEC-1989  
 Date Sample Rec'd: 15-DEC-1989  
 Date Analyzed: 18-DEC-1989  
 Sample Type: LIQUID

Project: (9500-089) KRAMER  
 Sample ID: MW3

**Purgeable Organics, EPA 624**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5.0
Acetone	ND	ND	10
Carbon Disulfide	ND	ND	5.0
Trichlorofluoromethane	ND	ND	5.0
1,1-Dichloroethene	ND	ND	5.0
1,1-Dichloroethane	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	5.0
Chloroform	ND	ND	5.0
1,2-Dichloroethane	ND	ND	5.0
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5.0
Carbon Tetrachloride	ND	ND	5.0
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5.0
1,2-Dichloropropane	ND	ND	5.0
trans-1,3-Dichloropropene	ND	ND	5.0
Trichloroethene	120.	ND	5.0
Dibromochloromethane	ND	ND	5.0
1,1,2-Trichloroethane	ND	ND	5.0
Benzene	ND	ND	5.0
cis-1,3-Dichloropropene	ND	ND	5.0
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5.0
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	160.	ND	5.0
1,1,2,2-Tetrachloroethane	ND	ND	5.0
Toluene	6.	ND	5.0
Chlorobenzene	ND	ND	5.0
Ethylbenzene	ND	ND	5.0
Styrene	ND	ND	5.0
Xylenes, Total	ND	ND	5.0

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FAX: (714) 891-5917

**Laboratory Report**

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ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8934925-002  
Date Sampled: 15-DEC-1989  
Date Sample Rec'd: 15-DEC-1989  
Date Analyzed: 22-DEC-1989  
Sample Type: LIQUID

Project: (9500-089) KRAMER  
Sample ID: MW3  
-----

Parameter	Units	Result	Blank	Detection Limit
Aluminum (EPA 200.7)	mg/L	0.51	ND	0.10
Iron (EPA 200.7)	mg/L	0.05	ND	0.05
Manganese (EPA 200.7)	mg/L	ND	ND	0.02

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**Laboratory Report**

-----  
 ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8934925-002  
 Date Sampled: 15-DEC-1989  
 Date Sample Rec'd: 15-DEC-1989  
 Date Analyzed: 27-DEC-1989  
 22-DEC-1989  
 18-DEC-1989  
 28-DEC-1989

Sample Type: LIQUID

Project: (9500-089) KRAMER  
 Sample ID: MW3  
 -----

Parameter	Units	Result	Blank	Detection Limit
Arsenic, TTLC (EPA 206.3)	mg/L	9.8	ND	5.0
Antimony, TTLC (EPA 200.7)	mg/L	0.84	ND	0.1
Barium, TTLC (EPA 200.7)	mg/L	0.07	ND	0.02
Beryllium, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Cadmium, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Chromium, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Chromium, Hex, TTLC (EPA 7196)	mg/L	ND	ND	0.05
Cobalt, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Copper, TTLC (EPA 200.7)	mg/L	ND	ND	0.05
Lead, TTLC (EPA 200.7)	mg/L	ND	ND	0.05
Mercury, TTLC (EPA 245.1)	mg/L	ND	ND	0.001
Molybdenum, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Nickel, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Selenium, TTLC (EPA 270.3)	mg/L	0.19	ND	0.03
Silver, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Thallium, TTLC (EPA 279.1)	mg/L	ND	ND	0.3
Vanadium, TTLC (EPA 200.7)	mg/L	0.04	ND	0.02
Zinc, TTLC (EPA 200.7)	mg/L	0.03	ND	0.02

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8934925-003  
 Date Sampled: 15-DEC-1989  
 Date Sample Rec'd: 15-DEC-1989  
 Date Analyzed: 18-DEC-1989  
 Sample Type: LIQUID

Project: (9500-089) KRAMER  
 Sample ID: MW4

**Purgeable Organics, EPA 624**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5.0
Acetone	74.	ND	10
Carbon Disulfide	ND	ND	5.0
Trichlorofluoromethane	ND	ND	5.0
1,1-Dichloroethene	ND	ND	5.0
1,1-Dichloroethane	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	5.0
Chloroform	ND	ND	5.0
1,2-Dichloroethane	ND	ND	5.0
2-Butanone	12.*	ND	10
1,1,1-Trichloroethane	ND	ND	5.0
Carbon Tetrachloride	ND	ND	5.0
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5.0
1,2-Dichloropropane	ND	ND	5.0
trans-1,3-Dichloropropene	ND	ND	5.0
Trichloroethene	190.	ND	5.0
Dibromochloromethane	ND	ND	5.0
1,1,2-Trichloroethane	ND	ND	5.0
Benzene	ND	ND	5.0
cis-1,3-Dichloropropene	ND	ND	5.0
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5.0
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	ND	ND	5.0
1,1,2,2-Tetrachloroethane	ND	ND	5.0
Toluene	39.	ND	5.0
Chlorobenzene	ND	ND	5.0
Ethylbenzene	6.	ND	5.0
Styrene	ND	ND	5.0
Xylenes, Total	40.	ND	5.0

\* The analytical results for 2-Butanone should not be considered representative unless the concentration in the sample exceeds five times the detection limit.

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FAX: (714) 891-5917

**Laboratory Report**

-----  
ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8934925-003  
Date Sampled: 15-DEC-1989  
Date Sample Rec'd: 15-DEC-1989  
Date Analyzed: 22-DEC-1989  
Sample Type: LIQUID

Project: (9500-089) KRAMER  
Sample ID: MW4  
-----

Parameter	Units	Result	Blank	Detection Limit
Aluminum (EPA 200.7)	mg/L	1.1	ND	0.10
Iron (EPA 200.7)	mg/L	ND	ND	0.05
Manganese (EPA 200.7)	mg/L	ND	ND	0.02

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# Enseco - CRL

7440 Lincoln Way • Garden Grove, CA 92641  
(714) 898-6370 • (213) 598-0458 • (800) LAB-I-CRL  
FAX: (714) 891-5917

## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8934925-003  
Date Sampled: 15-DEC-1989  
Date Sample Rec'd: 15-DEC-1989  
Date Analyzed: 27-DEC-1989  
22-DEC-1989  
18-DEC-1989  
28-DEC-1989

Sample Type: LIQUID

Project: (9500-089) KRAMER  
Sample ID: MW4

Parameter	Units	Result	Blank	Detection Limit
Arsenic, TTLC (EPA 206.3)	mg/L	0.005	ND	0.005
Antimony, TTLC (EPA 200.7)	mg/L	ND	ND	0.10
Barium, TTLC (EPA 200.7)	mg/L	0.49	ND	0.02
Beryllium, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Cadmium, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Chromium, TTLC (EPA 200.7)	mg/L	0.10	ND	0.02
Chromium, Hex, TTLC (EPA 7196)	mg/L	0.09	ND	0.05
Cobalt, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Copper, TTLC (EPA 200.7)	mg/L	ND	ND	0.05
Lead, TTLC (EPA 200.7)	mg/L	ND	ND	0.05
Mercury, TTLC (EPA 245.1)	mg/L	ND	ND	0.001
Molybdenum, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Nickel, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Selenium, TTLC (EPA 270.3)	mg/L	ND	ND	0.01
Silver, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Thallium, TTLC (EPA 279.1)	mg/L	ND	ND	0.3
Vanadium, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Zinc, TTLC (EPA 200.7)	mg/L	ND	ND	0.02

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8934925-004  
 Date Sampled: 15-DEC-1989  
 Date Sample Rec'd: 15-DEC-1989  
 Date Analyzed: 18-DEC-1989  
 Sample Type: LIQUID

Project: (9500-089) KRAMER  
 Sample ID: MW5

**Purgeable Organics, EPA 624**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5.0
Acetone	ND	ND	10
Carbon Disulfide	ND	ND	5.0
Trichlorofluoromethane	ND	ND	5.0
1,1-Dichloroethene	ND	ND	5.0
1,1-Dichloroethane	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	5.0
Chloroform	ND	ND	5.0
1,2-Dichloroethane	ND	ND	5.0
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5.0
Carbon Tetrachloride	ND	ND	5.0
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5.0
1,2-Dichloropropane	ND	ND	5.0
trans-1,3-Dichloropropene	ND	ND	5.0
Trichloroethene	18.	ND	5.0
Dibromochloromethane	ND	ND	5.0
1,1,2-Trichloroethane	ND	ND	5.0
Benzene	40.	ND	5.0
cis-1,3-Dichloropropene	ND	ND	5.0
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5.0
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	ND	ND	5.0
1,1,2,2-Tetrachloroethane	ND	ND	5.0
Toluene	270.	ND	5.0
Chlorobenzene	ND	ND	5.0
Ethylbenzene	39.	ND	5.0
Styrene	ND	ND	5.0
Xylenes, Total	300.	ND	5.0

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**Laboratory Report**

-----  
ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8934925-004  
Date Sampled: 15-DEC-1989  
Date Sample Rec'd: 15-DEC-1989  
Date Analyzed: 22-DEC-1989  
Sample Type: LIQUID

Project: (9500-089) KRAMER  
Sample ID: MW5  
-----

Parameter	Units	Result	Blank	Detection Limit
Aluminum (EPA 200.7)	mg/L	0.60	ND	0.10
Iron (EPA 200.7)	mg/L	0.41	ND	0.05
Manganese (EPA 200.7)	mg/L	0.08	ND	0.02

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**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson  
 Project: (9500-089) KRAMER

Analysis No.: G-8934925-001/004  
 Date Sampled: 15-DEC-1989  
 Date Sample Rec'd: 15-DEC-1989  
 Sample Type: LIQUID

**QA/QC Summary**

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
22-DEC-1989	ALUMINUM (EPA 200.7)	L	88	60-130	7.	30
22-DEC-1989	IRON (EPA 200.7)	L	92	60-130	7.	40
22-DEC-1989	MANGANESE (EPA 200.7)	L	89	60-130	6.	40
22-DEC-1989	ANTIMONY (EPA 200.7)	L	95	68-137	6.	30
22-DEC-1989	BARIUM (EPA 200.7)	L	87	63-137	6.	30
22-DEC-1989	BERYLLIUM (EPA 200.7)	L	84	66-130	2.	30
22-DEC-1989	CADMIUM (EPA 200.7)	L	87	72-141	4.	25
22-DEC-1989	CHROMIUM (EPA 200.7)	L	92	69-148	8.	30
22-DEC-1989	COBALT (EPA 200.7)	L	90	73-132	6.	30
22-DEC-1989	COPPER (EPA 200.7)	L	75	68-129	13.	25
22-DEC-1989	LEAD (EPA 200.7)	L	88	65-144	5.	25
22-DEC-1989	MOLYBDENUM (EPA 200.7)	L	92	69-144	8.	25
22-DEC-1989	NICKEL (EPA 200.7)	L	89	65-146	7.	25
22-DEC-1989	SILVER (EPA 200.7)	L	87	25-147	4.	52
22-DEC-1989	VANADIUM (EPA 200.7)	L	90	73-130	5.	25
22-DEC-1989	ZINC (EPA 200.7)	L	85	73-138	8.	25
27-DEC-1989	ARSENIC (EPA 206.3)	L	109	78-118	2.	25
22-DEC-1989	MERCURY (EPA 245.1)	L	95	41-137	2.	37
27-DEC-1989	SELENIUM (EPA 270.3)	L	109	41-137	5.	25
28-DEC-1989	THALLIUM (EPA 279.1)	L	100	75-109	0.	25
18-DEC-1989	1,1-DICHLOROETHENE (EPA 624)	L	66	58-118	9.	12
18-DEC-1989	TRICHLOROETHENE (EPA 624)	L	89	69-121	8.	16
18-DEC-1989	BENZENE (EPA 624)	L	89	63-120	9.	12
18-DEC-1989	TOLUENE (EPA 624)	L	87	68-121	7.	16
18-DEC-1989	CHLOROBENZENE (EPA 624)	L	91	66-123	6.	13
18-DEC-1989	CHROMIUM, HEX, TTLC (EPA 7196)	L	95	60-130	2.	40

M = Matrix Spike

L = Laboratory Control Sample Spike

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 FAX: (714) 891-5917

**Laboratory Report**

ENSR CONSTRUCTORS  
 19782 MacArthur Blvd., Suite 365  
 Irvine, CA 92715  
 ATTN: Mr. Erik Nelson

Analysis No.: G-8934925-004  
 Date Sampled: 15-DEC-1989  
 Date Sample Rec'd: 15-DEC-1989  
 Date Analyzed: 27-DEC-1989  
 22-DEC-1989  
 18-DEC-1989  
 28-DEC-1989

Sample Type: LIQUID

Project: (9500-089) KRAMER  
 Sample ID: MW5

Parameter	Units	Result	Blank	Detection Limit
Arsenic, TTLC (EPA 206.3)	mg/L	140.	ND	50.0
Antimony, TTLC (EPA 200.7)	mg/L	ND	ND	0.10
Barium, TTLC (EPA 200.7)	mg/L	0.03	ND	0.02
Beryllium, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Cadmium, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Chromium, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Chromium, Hex, TTLC (EPA 7196)	mg/L	ND	ND	0.05
Cobalt, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Copper, TTLC (EPA 200.7)	mg/L	ND	ND	0.05
Lead, TTLC (EPA 200.7)	mg/L	ND	ND	0.05
Mercury, TTLC (EPA 245.1)	mg/L	ND	ND	0.001
Molybdenum, TTLC (EPA 200.7)	mg/L	0.10	ND	0.02
Nickel, TTLC (EPA 200.7)	mg/L	0.03	ND	0.02
Selenium, TTLC (EPA 270.3)	mg/L	0.02	ND	0.01
Silver, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Thallium, TTLC (EPA 279.1)	mg/L	ND	ND	0.3
Vanadium, TTLC (EPA 200.7)	mg/L	0.13	ND	0.02
Zinc, TTLC (EPA 200.7)	mg/L	0.02	ND	0.02

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## Laboratory Report

ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-8934925-001  
Date Sampled: 15-DEC-1989  
Date Sample Rec'd: 15-DEC-1989  
Date Analyzed: 27-DEC-1989  
22-DEC-1989  
18-DEC-1989  
28-DEC-1989

Sample Type: LIQUID

Project: (9500-089) KRAMER  
Sample ID: MW2

Parameter	Units	Result	Blank	Detection Limit
Arsenic, TTLC (EPA 206.3)	mg/L	12.0	ND	5.0
Antimony, TTLC (EPA 200.7)	mg/L	ND	ND	0.1
Barium, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Beryllium, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Cadmium, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Chromium, TTLC (EPA 200.7)	mg/L	0.21	ND	0.02
Chromium, Hex, TTLC (EPA 7196)	mg/L	0.17	ND	0.1
Cobalt, TTLC (EPA 200.7)	mg/L	ND	ND	0.02
Copper, TTLC (EPA 200.7)	mg/L	ND	ND	0.05
Lead, TTLC (EPA 200.7)	mg/L	ND	ND	0.05
Mercury, TTLC (EPA 245.1)	mg/L	ND	ND	0.001
Molybdenum, TTLC (EPA 200.7)	mg/L	0.05	ND	0.02
Nickel, TTLC (EPA 200.7)	mg/L	0.06	ND	0.02
Selenium, TTLC (EPA 270.3)	mg/L	0.24	ND	0.03
Silver, TTLC (EPA 200.7)	mg/L	ND	ND	0.01
Thallium, TTLC (EPA 279.1)	mg/L	ND	ND	0.3
Vanadium, TTLC (EPA 200.7)	mg/L	0.05	ND	0.02
Zinc, TTLC (EPA 200.7)	mg/L	0.04	ND	0.02

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## CHAIN OF CUSTODY RECORD

934925-001/004

Client/Project Name <b>KRAMER</b>			Project Location <b>EL SEGUNDO, CA</b>			ANALYSES					
Project No. <b>9500-089</b>			Field Logbook No. <b>✓</b>			<div style="transform: rotate(-45deg); display: inline-block;"> <b>B240</b>  <b>TRAP MEANS 6010</b> </div>					
Sampler: (Signature) <b>Bill Luv</b>			Chain of Custody Tape No. <b>✓</b>								
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample							REMARKS
MW2	12/15/89			H <sub>2</sub> O	X						
MW2-BK	)			)							BACK-UP
MW-2	)			)		X					
MW3	12/15/89			H <sub>2</sub> O	X						
MW3-BK	)			)							BACK-UP
MW-3	)			)		X					
Relinquished by: (Signature) <b>Bill Luv</b>				Date 12/15/89	Time 2:10 pm	Received by: (Signature) <b>Phil A. Calt</b>				Date 12/15/89	Time 3:10 PM
Relinquished by: (Signature) <b>Phil A. Calt</b>				Date 12/15/89	Time 6:30 PM	Received by: (Signature) _____				Date	Time
Relinquished by: (Signature) _____				Date	Time	Received for Laboratory: (Signature) <b>Nils J. Cornejs</b>				Date 12/15/89	Time 6:20 pm
Sample Disposal Method:				Disposed of by: (Signature) _____						Date	Time
SAMPLE COLLECTOR ENSR CORP. 19782 MacArthur Blvd., STE 365 Irvine, CA 92715 (714) 476-0321				ANALYTICAL LABORATORY <b>CRL</b>						<b>ENSR</b>  <b>1/2</b>	

## CHAIN OF CUSTODY RECORD

934925-001/004

Client/Project Name <b>KIRAWER</b>			Project Location <b>EL SEGUNDO, CA</b>			ANALYSES <div style="transform: rotate(-45deg); display: inline-block;">8240</div> <div style="transform: rotate(-45deg); display: inline-block;">TAP MEANS 6010</div>						
Project No. <b>9500-089</b>			Field Logbook No. /									
Sampler: (Signature) <b>Bir Lin</b>			Chain of Custody Tape No. /									
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample							REMARKS	
MW 5	12/15/89			H <sub>2</sub> O	X							
MW 5 - BK	}			}								Back-up
MW - 5							X					
MW 4	12/15/89			H <sub>2</sub> O	X							
MW 4 - BK	}			}								Back-up BACK-UP
MW - 4							X					
Relinquished by: (Signature) <b>Bir Lin</b>				Date 12/15/89	Time 3:10 PM	Received by: (Signature) <b>Paul Alcantara</b>				Date 12/15/89	Time 3:10 PM	
Relinquished by: (Signature) <b>Paul Alcantara</b>				Date 12/15/89	Time 6:20 PM	Received by: (Signature) /				Date	Time	
Relinquished by: (Signature) /				Date	Time	Received for Laboratory: (Signature) <b>Miles J. Cornejo</b>				Date 12/15/89	Time 4:20 PM	
Sample Disposal Method:				Disposed of by: (Signature) /						Date	Time	
SAMPLE COLLECTOR  ENSR Corporation 19782 MacArthur Blvd., STE 365 Irvine, CA 91725 (714) 476-0321				ANALYTICAL LABORATORY  <b>CRL</b>						<b>ENSR</b>		
										1/2		



# Enseco

RECEIVED  
JAN 24 1990  
Ans'd .....

January 24, 1990

Mr. Charles Keller  
ENSR Consulting & Engineering  
19782 MacArthur Boulevard  
Suite 365  
Irvine, CA 92715

RE: Laboratory Analysis No. G-8932134

Dear Mr. Keller,

Enclosed is an amended report for Enseco-CRL's lab analysis number G-8932134. This report includes analytical data for samples taken at ENSR's Kramer site on November 16 and 17, 1989.

Initially, Enseco-CRL provided the analytical report (G-8932134) which included data sheets from Enseco-Cal Analytical Lab. It was requested by ENSR that this report be regenerated in a singular format to allow for quicker interpretation and manipulation. Enseco-CRL regenerated the report in the requested format, however several errors were made in re-entering the data and the report was issued to ENSR before correcting them.

Noted below are the corrections that have been made in the enclosed report (the enclosed amended report reflects the necessary corrections):

<u>ENSR ID</u>	<u>Analyte</u>	<u>Result</u>	<u>LOD</u>	<u>Correction Made</u>
SB3-5'	Antimony (TTLC)	ND	24.8 mg/kg	LOD was 5 mg/kg
SB3-5'	Arsenic (STLC)	ND	0.5 mg/L	Result was 2.4 mg/L
SB3-5'	Selenium (STLC)	ND	1. mg/L	Result was 2.1 mg/L
SB3-15'	Cadmium (STLC)	ND	0.05 mg/L	LOD was 0.025 mg/L
SB4-10'	Antimony (TTLC)	ND	10.7 mg/kg	LOD was 4.9 mg/kg
SB4-10'	Copper (TTLC)	4860	0.05 mg/kg	Result was 0.98 mg/kg LOD was 0.05 mg/kg

Mr. Charles Keller  
January 24, 1990  
Page 2

<u>ENSR ID</u>	<u>Analyte</u>	<u>Result</u>	<u>LOD</u>	<u>Correction Made</u>
SB4-10'	Arsenic (STLC)	ND	0.5 mg/L	Result was 1.5 mg/L
SB4-10'	Cobalt (STLC)	0.75	0.05 mg/L	Result was 0.05 mg/L
SB4-10'	Selenium (STLC)	ND	1. mg/L	Result was 2.7 mg/L
SB5-5'	Antimony (TTLC)	ND	11.8 mg/kg	LOD was 4.9 mg/kg
SB5-5'	Arsenic (STLC)	ND	0.5 mg/L	Result was 1.5 mg/L
SB5-5'	Selenium (STLC)	ND	1. mg/L	Result was 2.2 mg/L
SB4-15'	Beryllium (TTLC)	ND	0.20 mg/kg	LOD was 0.050 mg/kg

We apologize for any inconveniences you may have experienced due to these errors. Please feel free to call me should you have any questions or require additional services.

Sincerely,



Joann R. De La Ossa  
Program Administrator

Enclosure:



**SECTION 11**

**Enseco - CRL**

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(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL  
FAX: (714) 891-5917

January 30, 1990

ENSR CONSULTING & ENGINEERING  
19782 MACARTHUR BLVD., SUITE 365  
IRVINE, CA 92715  
ATTN: MR. ERIK NELSON

Analysis No.: G-9001819-001/004  
Date Sampled: 20,22-NOV-1989  
Date Relogged: 18-JAN-1990  
Project: (9500-089) KRAMER-EL SEGUNDO

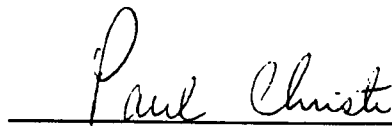
Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-9001819-001/004 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

Solid samples are reported on "as received" basis.

  
\_\_\_\_\_  
Reviewed

  
\_\_\_\_\_  
Approved

The Report Cover Letter is an integral part of this report.

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FAX: (714) 891-5917

**Laboratory Report****-----**  
**ENSR CONSTRUCTORS**

19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-9001819-001/004

Date Sampled: 20-NOV-1989

22-NOV-1989

Date Sample Rec'd: 20-NOV-1989

Date Relogged: 18-JAN-1990

Date Analyzed: 25-JAN-1990

26-JAN-1990

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
**-----**

Sample ID	Antimony mg/kg EPA 6010	Arsenic mg/kg EPA 7061
MW4-25'		94
MW4-30'		58
SB10-35'	92	82
SB10-40'	40	100
Blank	ND(1.0)	ND(0.001)

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**Laboratory Report**

-----  
ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-9001819-001/004  
Date Sampled: 20-NOV-1989  
22-NOV-1989  
Date Relogged: 18-JAN-1990  
Date Sample Rec'd: 20-NOV-1989  
Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
-----

**QA/QC Summary**

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
26-JAN-1990	ANTIMONY (EPA 6010)	L	90	60-125	3.	25
25-JAN-1990	ARSENIC (EPA 7061)	L	74	50-127	1.	25

M = Matrix Spike

L = Laboratory Control Sample Spike

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FAX: (714) 891-5917

January 31, 1990

ENSR CONSTRUCTORS  
19782 MacArthur Blvd., Suite 365  
Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-9001626-001/014  
Date Sampled: 13-NOV-1989  
15-NOV-1989  
17-NOV-1989  
22-NOV-1989  
16-NOV-1989  
Date Sample Rec'd: 13-NOV-1989  
Date Sample Relogged: 16-JAN-1990  
Project: (9500-089) KRAMER - EL SEGUNDO

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-9001626-001/014 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

Solid samples are reported on "as received" basis.

  
Reviewed

  
Approved

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**Laboratory Report****-----**  
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19782 MacArthur Blvd., Suite 365  
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ATTN: Mr. Erik Nelson

**Analysis No.: G-9001626-001****Date Sampled: 13-NOV-1989****Date Sample Rec'd: 13-NOV-1989****Date Analyzed: 22-JAN-1990****Date Sample Relogged: 16-JAN-1990****Sample Type: SOLID**

**Project: (9500-089) KRAMER - EL SEGUNDO**  
**Sample ID: SB-1B-15**  
**-----**

<b>Parameter</b>	<b>Units</b>	<b>Result</b>	<b>Blank</b>	<b>Detection Limit</b>
Arsenic/STLC (EPA 206.3)	mg/L	370	ND	50

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**Laboratory Report**

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19782 MacArthur Blvd., Suite 365  
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ATTN: Mr. Erik Nelson

Analysis No.: G-9001626-002  
Date Sampled: 15-NOV-1989  
Date Sample Rec'd: 15-NOV-1989  
Date Analyzed: 22-JAN-1990  
23-JAN-1990  
Date Sample Relogged: 16-JAN-1990  
Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: SB-2-16  
-----

Parameter	Units	Result	Blank	Detection Limit
Copper/STLC (EPA 200.7)	mg/L	ND	ND	0.50
Lead/STLC (EPA 200.7)	mg/L	5.1	ND	0.50
Zinc/STLC (EPA 200.7)	mg/L	2,500	ND	10.5
Arsenic/STLC (EPA 206.3)	mg/L	130	ND	10

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**Laboratory Report**

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Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-9001626-003  
Date Sampled: 17-NOV-1989  
Date Sample Rec'd: 20-NOV-1989  
Date Analyzed: 22-JAN-1990  
Date Sample Relogged: 16-JAN-1990  
Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: SB-6-20  
-----

Parameter	Units	Result	Blank	Detection Limit
Arsenic/TTLC (EPA 7061)	mg/kg	0.60	ND	0.10

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Analysis No.: G-9001626-004  
Date Sampled: 17-NOV-1989  
Date Sample Rec'd: 20-NOV-1989  
Date Analyzed: 22-JAN-1990  
Date Sample Relogged: 16-JAN-1990  
Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: SB-6-25  
-----

Parameter	Units	Result	Blank	Detection Limit
-----	-----	-----	-----	-----
Arsenic/TTLC (EPA 7061)	mg/kg	1.3	ND	0.10

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**Laboratory Report****ENSR CONSTRUCTORS**

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Analysis No.: G-9001626-005

Date Sampled: 15-NOV-1989

Date Sample Rec'd: 15-NOV-1989

Date Analyzed: 26-JAN-1990

Date Sample Relogged: 16-JAN-1990

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: B-6-5

Parameter	Units	Result	Blank	Detection Limit
Arsenic/STLC (EPA 206.3)	mg/L	17	ND	2.5

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Irvine, CA 92715  
ATTN: Mr. Erik Nelson

Analysis No.: G-9001626-006  
Date Sampled: 22-NOV-1989  
Date Sample Rec'd: 22-NOV-1989  
Date Analyzed: 17-JAN-1990  
Date Sample Relogged: 16-JAN-1990  
Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: SB-10-16  
-----

Parameter	Units	Result	Blank	Detection Limit
Lead/STLC (EPA 239.1)	mg/L	2.6	ND	0.2

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**Laboratory Report****-----**  
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Irvine, CA 92715  
ATTN: Mr. Erik Nelson

**Analysis No.: G-9001626-007****Date Sampled: 16-NOV-1989****Date Sample Rec'd: 19-NOV-1989****Date Analyzed: 22-JAN-1990****Date Sample Relogged: 16-JAN-1990****Sample Type: SOLID**

**Project: (9500-089) KRAMER - EL SEGUNDO**  
**Sample ID: SB-3-20**

<b>Parameter</b>	<b>Units</b>	<b>Result</b>	<b>Blank</b>	<b>Detection Limit</b>
Arsenic/STLC (EPA 206.3)	mg/L	12	ND	1.3

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**Laboratory Report**

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ATTN: Mr. Erik Nelson

Analysis No.: G-9001626-008  
Date Sampled: 17-NOV-1989  
Date Sample Rec'd: 19-NOV-1989  
Date Analyzed: 22-JAN-1990  
Date Sample Relogged: 16-JAN-1990  
Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: SB-4-15  
-----

Parameter	Units	Result	Blank	Detection Limit
-----	-----	-----	-----	-----
Antimony/STLC (EPA 200.7)	mg/L	41	ND	1.0
Selenium/STLC (EPA 270.3)	mg/L	0.02	ND	0.01

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ATTN: Mr. Erik Nelson

Analysis No.: G-9001626-009  
Date Sampled: 17-NOV-1989  
Date Sample Rec'd: 19-NOV-1989  
Date Analyzed: 22-JAN-1990  
Date Sample Relogged: 16-JAN-1990  
Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: SB-5-18  
-----

Parameter	Units	Result	Blank	Detection Limit
-----	-----	-----	-----	-----
Arsenic/STLC (EPA 206.3)	mg/L	140	ND	15

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ATTN: Mr. Erik Nelson

**Analysis No.: G-9001626-010****Date Sampled: 17-NOV-1989****Date Sample Rec'd: 19-NOV-1989****Date Analyzed: 17-JAN-1990****Date Sample Relogged: 16-JAN-1990****Sample Type: SOLID**

**Project: (9500-089) KRAMER - EL SEGUNDO**  
**Sample ID: MW-5-5**

<b>Parameter</b>	<b>Units</b>	<b>Result</b>	<b>Blank</b>	<b>Detection Limit</b>
Antimony/STLC (EPA 204.1)	mg/L	380	ND	15

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ATTN: Mr. Erik Nelson

Analysis No.: G-9001626-013  
Date Sampled: 17-NOV-1989  
Date Sample Rec'd: 19-NOV-1989  
Date Analyzed: 22-JAN-1990  
Date Sample Relogged: 16-JAN-1990  
Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: HB5-1  
-----

Parameter	Units	Result	Blank	Detection Limit
Antimony/STLC (EPA 200.7)	mg/L	28	ND	1.0
Arsenic/STLC (EPA 206.3)	mg/L	3.1	ND	0.25

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**Laboratory Report**

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Analysis No.: G-9001626-014  
Date Sampled: 17-NOV-1989  
Date Sample Rec'd: 19-NOV-1989  
Date Analyzed: 22-JAN-1990  
Date Sample Relogged: 16-JAN-1990  
Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: SB-4-30  
-----

Parameter	Units	Result	Blank	Detection Limit
Antimony/STLC (EPA 200.7)	mg/L	36	ND	1.0
Arsenic/STLC (EPA 206.3)	mg/L	5.1	ND	0.50
Selenium/STLC (EPA 270.3)	mg/L	0.13	ND	0.01

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**Laboratory Report**

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ATTN: Mr. Erik Nelson

Analysis No.: G-9001626-011  
Date Sampled: 17-NOV-1989  
Date Sample Rec'd: 19-NOV-1989  
Date Analyzed: 22-JAN-1990  
Date Sample Relogged: 16-JAN-1990  
Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: HB4-1  
-----

Parameter	Units	Result	Blank	Detection Limit
Copper/STLC (EPA 200.7)	mg/L	6.6	ND	0.50
Lead/STLC (EPA 200.7)	mg/L	3.2	ND	0.50
Zinc/STLC (EPA 200.7)	mg/L	90	ND	0.2

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Analysis No.: G-9001626-012  
Date Sampled: 17-NOV-1989  
Date Sample Rec'd: 19-NOV-1989  
Date Analyzed: 22-JAN-1990  
Date Sample Relogged: 16-JAN-1990  
Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO  
Sample ID: HB4-5  
-----

Parameter	Units	Result	Blank	Detection Limit
-----	-----	-----	-----	-----
Arsenic/STLC (EPA 206.3)	mg/L	57	ND	5.0

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Analysis No.: G-9001626-001/014

Date Sampled: 13-NOV-1989

15-NOV-1989

17-NOV-1989

22-NOV-1989

16-NOV-1989

Date Sample Rec'd: 13-NOV-1989

Date Sample Relogged: 16-JAN-1990

Sample Type: SOLID

Project: (9500-089) KRAMER - EL SEGUNDO

**QA/QC Summary**

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
22-JAN-1990	ANTIMONY/STLC (EPA 200.7)	L	103	68-137	15.	30
22-JAN-1990	COPPER/STLC (EPA 200.7)	L	84	68-129	12.	25
22-JAN-1990	LEAD/STLC (EPA 200.7)	L	99	65-144	15.	25
23-JAN-1990	ZINC/STLC (EPA 200.7)	L	94	73-138	3.	25
22-JAN-1990	ZINC/STLC (EPA 200.7)	L	94	73-138	8.	25
17-JAN-1990	ANTIMONY/STLC (EPA 204.1)	L	95	60-130	11.	40
26-JAN-1990	ARSENIC/STLC (EPA 206.3)	L	101	78-118	12.	25
22-JAN-1990	ARSENIC/STLC (EPA 206.3)	L	100	78-118	15.	25
17-JAN-1990	LEAD/STLC (EPA 239.1)	L	93	65-144	5.	25
22-JAN-1990	SELENIUM/STLC (EPA 270.3)	L	98	41-137	24.	25
22-JAN-1990	ARSENIC/TTLC (EPA 7061)	L	74	50-127	6.	25

M - Matrix Spike

L - Laboratory Control Sample Spike

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